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TRANS-URETHRAL PROSTATECTOMY

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I wish to state in the beginning, this paper is presented by the urological department, University Hospital — I am merely acting as spokesman—the material herein presented represents as nearly as can be determined the status of trans-urethral resection at this time.

Until some better method appears trans-urethral prostatectomy is here to stay; at the present moment with its numerous methods, machines, and technique, nothing is stable; it is however the beginning of a new era in urology, and brings to us the first advance since Caulk came out with the cautery punch about 1920. In this larger field we must look upon all sides and weigh carefully all the advantages and disadvantages, we must be determined by time, experience, and impersonal analysis of results as compared by present day surgical removal, as it is at present, or may be perfected.

The journals (urological publications at least) are flooded with monographs on this subject. Every so often the medical profession is confronted with some new method or remedy which is claimed as miraculous in its therapeutic value and which like the candle, lighted at both ends, soon burns out and is gone. Most of you remember ten years ago the high hopes we had for the cure or arrest of cancer of bladder and prostate with radium. Mercurochrome and Hexylresorcinol held the center of the stage for a brief period, and now the dye twins pyridium and serenium are doing a Kentucky derby before us, and in my opinion will be "also rans." One more factor that must not be overlooked is the tremendous appeal this method will have on both doctor and patient. Its advertising possibilities are great and every owner of a cystoscope is too liable to procure inadequate and unreliable equipment and attempt to operate, only to fail, and then condem it. So the final analysis must come from calm, unbiased, open minded, competent observers after consideration of all the facts.

REVIEW

It is well at this time to call attention to a few accepted facts about the prostate gland and its role in urinary obstruction.

1. Prostatic hypertrophy or prostatism in its self is a harmless tumor until it becomes an obstruction to the urine out-put and then it produces the damage by causing a residual urine which becomes infected and gives rise to the usual train of symptoms well known to this condition, we feel it is important to keep this fact in mind, when considering the operation for prostatectomy. Too often it seems the hypertrophied prostate is considered in the light of a foreign body to be removed.

2. The malignant prostate is not routinely operated for entire removal, certain cases can be demonstrated to have one or more lobes causing obstruction and in these the surgeon is justified to attempt bladder drainage but as a rule the malignant prostate is not removed,

OBJECTIONS TO SURGICAL REMOVAL

1. Probable loss of sex function.
2. Undue delay due to the above.
3. Poor risk, due to delay.
4. Long preparation period and hospitalization.
5. Hemorrhage.
6. Shock.

In trans-urethral resection all of the above listed objections are modified or the hazard almost completely eliminated. It is our belief that the real reason for the horror of this operation is the loss of sex function. The operation is delayed so long by both patient and doctor that the patient's chances for recovery due to the irreparable damage to the kidney and heart

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are reduced to a minimum. With this obstacle removed we could resect these cases much earlier, when the surgical risk would be infinitely better. This automatically eliminates the procrastination thus rising out of operating risk. We are unable to say definitely at this time that with the resection method the patient would retain his sexual power, but anatomically and surgically there is no reason to believe that he should not, because that part of the gland which carries the venous plexus necessary in this mechanical phenomenon is not destroyed, (or need not be).

While we carefully prepare the patient and give him the same "urological work out" as in prostatectomy; namely: bladder drainage, by indwelling catheter until infection is cleared, bladder visualization to determine the type of enlargement or any other anomalies, renal function as determined by blood chemistry, and general treatment during this process to build resistance and increase clotting time. Still the process is not so long, and no preliminary supra pubic drainage with its resultant discomforts are needed.

QUOTATIONS

We believe the best cross section we can give you at this time is to read verbatim the conclusions of some of the most careful operators using this method of prostatectomy—we have purposely omitted our personal experiences.

Theodore M. Davis, M.D., of Charlotte, North Carolina, 339 cases in five years and one month, classified as follows:

Contracture of vesical orifice	21
Median lobe of bar	87
Unilateral lobe	8
Unilateral and median lobe	39
Bilateral lobes	58
Bilateral and median lobes	62
Carcinoma	40

makes these conclusions:

Prostatectomy with its potentially high mortality and morbidity rate, has not attained the ideal in the correction of prostatic obstruction.

Resection reduces the removal of the obstruction to a minor operation as compared with prostatectomy.

The final results following resection are equal, if not superior, to those obtained by prostatectomy.

The incidence of recurrence following resection as claimed by those advocating prostatectomy has not been substantiated clinically. A recurrence morbidity of 23 to 1 in favor of resection is reported in this series of cases.

George R. Livermore, M.D., Memphis, Tennessee, draws the following conclusions but does not specify the number of cases operated.

1. Prostatic resection marks a distinct advance in the treatment and relief of hypertrophy of the prostate.

2. The ease of its performance, the lack of shock and dangerous complications, and the diminished suffering to the patient should commend it to all prostatics, as well as to all urologists.

3. The McCarthy unit has proved eminently satisfactory.

4. It may be necessary to repeat resection, but two resections are far preferable to one prostatectomy.

5. Resection is such an advance that the writer believes prostatectomy will soon be reserved for only the very large intravesical and intra-urethral hypertrophies whose immense size render resection impossible.

6. Hemorrhage is still a factor to be considered and every effort should be exerted to check it at the time of operation and to prevent its recurrence later.

7. Complications following resection occur less and are far less serious than those following prostatectomy.

Charles Pierre Mathe, M.D., F.A.C.S., San Francisco, California, writing for the urological department draws the following conclusions in 102 cases:

1. There is an increasing field for the employment of the operative cystoscope in the relief of prostatism which embraces dividing, tunnelling, or punching the obstruction prostatic bar by the electro-cautery, vesical neck resection or the punch. These benign endo-vesical procedures can always be applied in order to relieve hypertrophy consisting of fibrosis of the collar type, sclerosis due to atrophy and most cases of median lobe hypertrophy. This method is also applicable to increasingly large numbers of cases presenting the early stages of hypertrophy of the median and lateral lobes and also to advanced cases presenting the early stages of hypertrophy of the median and lateral lobes and also to advanced cases presenting bad surgical risks. With intelligent choice of the methods described it can be applied to a large number of so-called borderline

cases which are commonly subjected to prostatectomy.

2. It does not replace prostatectomy which should be reserved for those cases in which the gland has attained considerable size, and for those in which it had been necessary to perform cystotomy in order to relieve urinary retention.

3. It is a simple procedure that can be done under local anesthesia and is followed by little or no general reaction. Epididymitis can be prevented by partial vasecotomy. Primary hemorrhage is easily controlled at the time of operation and secondary hemorrhage can be prevented by proper post-operative care. No mortality, pulmonary embolus or incontinence occurred in any of these cases. The sexual power was not weakened and the reproductive power was preserved in the majority of the 102 cases.

Alfred I. Folsom, M.D., Dallas, Texas, reports on a series of 50 cases having the following to say:

The period of convalescence of our cases has been remarkably free from the difficulties, only in the very occasional case do we see anything other than a minor febrile reaction.

In three cases we failed to remove enough of the obstruction tissue and had to go back for a second bite. This was embarrassing, but in each case the second trial netted us a good result. With increasing experience this will be lessened except in the very large gland, and in these I have adopted the policy of telling the patient that there is a possibility of having to have two sittings to remove enough tissue.

The results are all that one could expect. In every case except one, the bladder has been restored to an excellent functional condition. I am sure our results are just as good if not better than they were with the prostatectomies. The stream has a good force and there is practically no difficulty in starting and stopping.

William J. Engel, M.D., Cleveland, Ohio, makes the following observations after 48 operations. Sixteen operations with the Sterns resectoscope.

We feel that trans-urethral resection is an excellent procedure for the relief of patients with prostatic obstruction. The advantages are (1) the slight risk and low mortality rate attending the procedure, and (2) the economic advantage of a very much shortened hospital stay.

It is essential that an adequate pre-operative cystoscopic examination be made in order to determine the type of hypertrophy present. Familiarity with each case is essential for the technique of the resectoscope.

There still remains a certain group of patients who cannot be relieved by trans-urethral resection, and in these cases prostatectomy, either supra pubic or perineal, may have to be performed. However, increased experience in this procedure may cause this number to diminish.

Clinton K. Smith, Kansas City, after a series of 20 cases draws these conclusions:

This procedure which we designate as trans-urethral prostatectomy is the outgrowth of the punch idea. In its present state of perfection it bids fair to exceed the fondest hopes of the punch sponsors.

The dreaded operation of prostatectomy has previously deterred many from seeking relief from prostatic obstruction with its attendant irreparable damage to kidneys, heart and general vitality.

HISTORY AND TECHNIQUE

In reviewing the history of this work we find just about as many views as there are essays, all are agreed however, that from the early part of the nineteenth century attempts have been made by Guthrie, Home Marcier, Bottini and many others, the real practical advance was started by Hugh Young in 1909 and further advanced by Caulk in 1920, but all of these have had the disadvantage of working blindly. Since that time numerous instruments have appeared in an attempt at removal of the obstructing portion of the prostate. The chief difficulty has been to procure an instrument which would permit sufficient observation and carry a cutting cautery loop, Stern developed such a unit five years ago which was improved by Davis. Since that time numerous instruments, both the cautery and the electrical currents, until at the present time three or four are on the market which seem to have sufficient power to be satisfactory.

The valve tube set machine is considered by disinterested scientists and electrical research engineers a great advance over the spark gap type. A General Electric subsidiary, whose research interests and practical accomplishments are admittedly unexcelled, seems to be convinced that the trend of the best modern engineer-

ing practice is toward the valve tube set machine, but does not market it, since it is commercially unattractive, by reason of the comparatively small volume of business available. In a machine of the spark gap type, the maximum frequency of oscillations possible to be obtained is 1,220,000, while in the valve tube type it is perfectly feasible to obtain a frequency of 2,200,000 oscillations."

We are not prepared at this time to state which is the preferable electrical unit.

The operative technique is so very intricate and in such a state of turmoil at this time that we will make no attempt to present this in detail, but will confine ourselves to showing a few slides demonstrating the manner in which the resection is performed and some motion pictures of the layout made by Doctor Akin.

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DISCUSSION: *Dr. Henry Browne,* Tulsa.

Let us remember that prostatic obstructions are not pathological in origin, but due entirely to mechanical opposition in the outflow of urine. The object in any procedure is to relieve this condition and to remove the opposition to the outflow of the urine. This was done first by the the Young punch method, later modified in various ways, and by prostatectomy. We all know what a prostatectomy is. This method is a step further than the punch method, that is, we are able under actual vision with this cutting current to remove the obstructing force in the prostate. We do not remove the entire gland but just that part that is causing obstruction. As for the results, if you read the Journal of the American Medical Association for December of last year, you found in this journal a report by Davis, who is the man who really brought this to a successful conclusion, you saw his report of cases with no mortality, functional result even better than in complete removal of the prostate, average hospital stay of four days, and no cutting. In the same issue there was an article by Dr. Lowsly of New York, who is a very good man. He reported on some hundred cases of prostatectomy with three per cent mortality and a longer stay in the hospital, and same result. If you can get the same result by this, there is no need in talking about a prostatectomy. Dr. Davis presented his first paper before the American Urological Association at New Orleans in June of last year, and everybody in the country began to use this method. Personally, I believe that in five years prostatectomy will be an obsolete operation. By resection you can take care of ninety per cent of prostatic hypertrophy. The same general tone is obtained from every man who has tried this method. It is a more logical procedure and accomplishes all that has ever been accomplished by prostatectomy. The patient is in the hospital, as Dr. Davis' figures show, an average of four days. The general conclusion of men who have been using it is that we have reached a milestone in the treatment of prostatic obstruction. Take these old complications of prostate where sometimes it is impossible to get in them. With this method you are able to get rid of the obstruction and they don't have any more trouble with drainage, which is one of the greatest difficulties in prostatectomy. I believe this method will become the general procedure, and it is a logical procedure, accomplishing all that prostatectomy ever has done with a minimum of bad results to the patient. I believe as it becomes better known that prostatics will come earlier instead of as a last resort. By this relatively simple and highly technical procedure the obstructing force can be removed and the gland will not have to be removed, since it atrophies and actually grows smaller, as has been found by men who have used it over a period of time. This procedure is carried out entirely under vision, and if you know what you are doing and can watch your bladder and urethra and are conservative, you can do your patient no harm. I believe this is a milestone in the treatment of prostatic obstructions of any kind, and that in time it will largely replace prostatectomy.

Dr. Bolend: I have nothing to add.

ACUTE MYELITIS (MYELOMALACIA): SYNDROME OF OCCLUSION OF ANTERIOR SPINAL ARTERY AT FIFTH CERVICAL CORD SEGMENT

Walter F. Schaller, Archie M. Roberts and Edward F. Stadtherr, San Francisco (Journal A. M. A., November 5, 1932), record two cases of acute myelitis illustrating the syndrome of occlusion of the anterior spinal artery at the fifth cervical cord segment. They discuss in detail the circulation of the spinal cord and point out that extensive acute myelitis occurring in the lower cervical cord segments produces a definite clinical picture: flaccid paralysis of the upper extremities with subsequent atrophies and contractures, spastic paralysis of the trunk and lower extremities and impairment of pain and temperature sensibility below the level of the lesion.

STEREOSCOPIC TREATMENT OF HETEROPHORIA*

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The question of whether the two eyes are properly harnessed together so that binocular single vision, without discomfort, is possible, is a very important responsibility of every refractionist. The fact that a patient sees clearly monocularly does not by any means indicate that he or she will have comfortable binocular single vision.

Binocular single vision is normal in the human race. It is made possible by: (1) the partial decussation of the retinal fibers in the chiasm, so that the brain can receive impressions from corresponding retinal points as a single impression: (2) by means of cerebral centers governing conjugate movements, so that the eyes may at all times be placed to receive impressions on corresponding retinal points; (3) by reason of a fusion faculty, which enables the individual to superimpose his foveal images and make them one.

In a study of binocular single vision, inasmuch as an object which falls on corresponding retinal points is received as a single impression in the cortical visual center, one might on first thought regard the act as a simple automatic act, which needs no further explanation. That it is more than a simple automatic act is best demonstrated by a prism experiment. If during this act a four diopter prism is placed before one eye, base in, the discomfort caused by the displacement of the image of this eye, is followed unconsciously by a corresponding rotation of the eye outward and singleness of vision is restored. There is then a desire or a love for single vision. It is not purely an automatic act, but an active definite effort toward a definite end. This desire for singleness of vision we call a fusion faculty.

Whether we call the force which impels to fusion a "fusion faculty" or a "fusion center" is purely an academic question with the weight of the argument in favor of the former. We know of no such center and it is safe, therefore, to speak of a "fusion faculty." Without such an overruling guidance, the necessarily exact coordination is inconceivable. The frequent clinical experience, that loss of sight of one eye is often followed by divergence, is an unanswerable argument for the importance of the fusion faculty in keeping eyes straight, and it plays quite as important a part in the production and the cure of those tendencies to turn, grouped under the name heterophoria.

A person devoid of a fusion faculty, or with only one eye, learns rapidly fixing the eye on objects to one side, and thus establishes a parallax which enables him to measure the distance by a sort of muscle sense. The inferiority of this sort of estimation of distance, compared with that possible to one with a well developed binocular fusion sense, was shown by Howard at the Mineola experiment station. He claimed that many accidents in landing were due to aviators' deficiency in estimation of depth difference. Just how valuable this faculty is to chauffeurs, engineers and street car motormen has never been critically determined.

While a good fusion faculty is always a valuable possession, and in many walks of life absolutely essential, it is admitted that one sees many patients totally lacking such a sense. These people use each eye separately and are not conscious of any loss, and have not asthenopia from incoordination. Fusion faculty is also a matter of degree. Some patients are able to fuse concrete pictures by a rapid alternation of the two eyes, but have no conception of perspective. Other cases are able to fuse large concrete pictures and have some perspective. The great majority of people can fuse large stereoscopic pictures, but many fail conspicuously when viewing type of the size ordinarily used.

Orthophoria, from which heterophoria is a departure, can be defined as "a tendency for the eyes to set themselves truly for the object of fixation." It is an undue tax on attention which gives to heterophoria its importance. It may be that the symptoms, in a given case, are dependent in part, if not wholly, on errors of refraction; but it is a serious mistake to suppose that eye-strain is always associated with the ciliary muscle. The ciliary muscle is only one of eight muscles connected with each eye and each of the seven other muscles, when called on to do abnormal work, is just as capable of developing symptoms. People who have no symptoms, and yet have heterophoria are possessed of a stable nervous system and are physically strong, The physically weak and

*Read at Annual Meeting, Tulsa, May 26, 1932.

the nervously unstable must be sufferers from eye-strain of whatever character. Growing children, especially those that are delicate, when too hard pressed in their school work, almost invariably present some one of the many symptoms of strain,

For his own enlightenment Dr. Wells studied one thousand consecutive cases of patients with eye-strain. He thought that 25 percent needed stereoscopic treatment. For various reasons only 15 per cent needed were so handled. About 85 per cent of those were cured of symptoms or much relieved. In my own work I do not find that many cases for fusion training, however, there are a large number.

I use the Wells method of stereoscopic treatments with his charts and am very enthusiastic about it. This treatment is indicated when the refractive error under cycloplegia is small, (2) in exophoria and convergence insufficiency, (3) in esophoria, (4) when glasses fail to relieve. If the refractive error under cycloplegia be slight, as compared with the heterophoria, one is justified in treating the heterophoria and ignoring the refractive error. In heterophoria I do not treat patients who have no symptoms, but tell them that here is a condition that might need further treatment. Fusion treatment is therefore indicated when proper correction of the patient's refraction, and when general condition is negative, leaves him with uncomfortable symptoms suggestive of eye-strain.

The Wells method is efficient and not too time-consuming for an intelligent handling of the case. The first essential is a phoro-optometer with two revolving prisms and a smooth mechanism for decentering the full-sized plus 10.00 D. spheres from 50 mm. to 70 mm. p. d. The card holder is fixed at 10 cm. thus putting the accommodation at rest. Each millimeter of decentration produces one prism degree just as definitely as the use of a separate prism in the clips.

The fundamental principle of successful stereoscopic muscle training is the insinuation of the prismatic element by decentering strong spheres, the objects remaining fixed. It is because of the smooth motion of the decentering screw for pupillary adjustment that the phoro-optometer is so well adapted for training. The application of the principle of decentering of the spheres for the purpose of introducing extra prismatic effect, as applied to fusion training, is believed to be original with Javal, but it has been greatly extended by Wells. In exophoria we exercise by decentering spheres outward, and for esophoria inward.

The patients become interested in the treatment and in helping themselves. There are several series of Wells' chart. Much attention is given series E to develop fusion with perspective. F and G series are for the purpose of eliminating suppression or suspenopsia and developing a refinement of the fusion faculty. Series G is a continuation and amplification of series F. In series F and G there are various control marks which are too numerous to mention here, the examiner has to go through the test with himself, or have someone else manipulate the cards so that he may properly appreciate the significance and marks on each chart. There is something in each half of every chart which is common to both, and necessitates fusion before properly seen by the patient. This series not only determines the quality or refinement of the fusion faculty, but is a splendid exercise to cultivate true binocular vision and admirable for the elimination of suspenopsia. Series H is splendid for developing convergence and relaxing convergence. The I series is for a straight development of convergence, or relaxation of convergence.

If only a slight suppression of one eye is detected during the test, we must remember that the very conditions of the test force the patient's attention to the separate objects for the two eyes, and that under ordinary conditions suppression is probably much more habitual. It is this question of suppression that has made it so difficult to give proper fusion convergence exercises with loose prisms, rotary prisms, or fixed prisms. The reader, if he has practiced duction treatments by any of these methods, can recall cases that would habitually suppress vision in one eye, leaving the operator to continue adding prism power until possibly the object of regard travels so far to one side that it disappears. With stereoscopic treatment this is impossible, because the moment that suppression takes place part of the picture is lost and the patient manifests the suppression by losing part of the picture, which destroys the whole.

The blending of two objects into one is a more desirable and effective treatment for orthoptic training than the breaking of a single object into two. The two eyes

are really a stereoscope, each eye receives a picture a little different from the other. Just as in the ordinary prism exercises, with the eyes fixed on a distant point, the aversion to diplopia is an incentive to increase muscle action, so here the fused image becomes an anchor. With the eyes fastened on a fused image, made up of half pictures, one strongly resists an impulse which tends to pull it to pieces.

Convergence is a function which was only necessary in a comparative yesterday from the viewpoint of the development of the human being, and in the past one hundred years, particularly in the past fifty years, close work of all kind consumes most of the working hours for many thousand people. The development of this fusion convergence is very necessary for binocular comfort when close work is attempted for a considerable period.

In convergence insufficiency we are dealing with an inco-ordination of convergence and accommodation. The nerve impulse sufficient to secure accommodation is insufficient for convergence. To relieve this and to restore co-ordination, it is necessary to incite, associate and to make habitual a greater degree of convergence with a given amount of accommodation. For this reason it has always seemed that exercises which bring into play the accommodation as well as the convergence are illogical, e. g., dot exercises at the reading distance or candle as used by Gould. I never had any results with muscle exercises until I used Wells' method.

Not infrequently one sees a patient who has learned to overcome strong prisms who is still uncomfortable, because his fusion faculty is poor and co-ordination for small objects, like types, inexact. However, usually, when a high development of fusion convergence has been obtained, that patient will successfully pass the test for perspective, suppression and refinement. A patient may display an adduction of 50 degrees but may have an illsustained convergence which definitely indicates a poor quality of this function. Fatigue sets in quickly and the patient cannot read for any length of time. I would say that ordinarily at fifty-five to sixty years of age, when a patient is suffering from convergence insufficiency, the best plan is for him to use prisms in his reading glasses. Occasionally I find there is weakness of convergence due to hyperphoria. This hyperphoria sometimes is not elicited by ordinary test but is found by Wells' chart. With correction of hyperphoria the convergence becomes normal and symptoms are relieved.

The power of a muscle depends not alone on its own physical properties, such as size, nutrition, place of attachment, etc., but also on the strength of the nervous stimulus which excites its action. This is analogous to other sensations. The pianist makes his fingers educate his brain, that the brain may do better work with the fingers. Tasks consciously performed are in time relegated to subconscious control. Dr. Jackson says: "orthoptic exercises are for nerve training—all forms of orthoptic apparatus depend for their usefulness upon a fusion sense, but whether this sense is strong or feeble, real exercise is possible only by getting the patient to make the effort."

The two essentials for muscle training are perseverance and concentration. It is better to allow no third person in the room, not even the assistant or secretary. It makes a difference whether we knock at a door softly or loudly, and sometimes have to knock repeatedly before it opens. It is so with the brain. Exercises may seem to have no effect for some time, and then suddenly succeed, the effect being cumulative, each one, though apparently disappointing, contributing to the final end. In all exercises of this sort there is a psychic factor which should be utilized.

It is best to delay giving home treatments until the patient has a sufficient number of office treatments to understand the desired end. When progress is shown at the office, the patient grasped the idea of what is required, and is then better able to accomplish what the home treatments are designed to do, that is, aid the refractionist in restoring ocular comfort. For home treatment an ordinary Holmes stereoscope is used with a set of charts. Definite lessons are given for home treatment. He should use the eyes, not rest them, and disregard discomfort; when the eyes feel especially uncomfortable they should be used.

In a large majority of exophoria cases fusion exercises will give relief of symptoms. With perhaps one-half of one's successful exophoria cases orthophoria will be secured, with the other half the heterophoria will be reduced, but the patient will have secured such a super-abundance

of amplitude that he is able to overcome the wrong tendencies automatically without discomfort.

Stereoscopic exercises have been found to be of considerable value in esophoria. In a majority of cases, excessive convergence is due to the inability of the patient to hold the innervations within bounds. The response to the innervation to converge is excessive with inability on the part of the patient to hold it in check. The stereoscope with the aid of fusion tends to stabilize and to restrict excessive action. The results in esophoria, however, are not as good as in exophoria.

Profession puts too many glasses on people, especially children and young people which could be eliminated with fusion exercises and sometimes a stimulant to the accommodation as pilocarpine. Also too many glasses are changed.

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TISSUE SUBSTRATE MICROCULTURE FOR TUBERCLE BACILLI

H. J. Corper, Denver (Journal A. M. A., Oct. 15, 1932), gives a simple culture method for growing small numbers of tubercle bacilli from suspected specimens that are negative on microscopic examination of smears. The method designated the "tissue substrate micromethod for culturing tubercle bacilli" is based on the fact that from 1 to 2 volumes of 6 per cent sulphuric acid will destroy undesirable contaminators and saprophytic acid-test bacilli within from one-half to one hour at 37 C., and that blood or egg yolk, after the sulphuric acid treatment, neutralized with an isotonic solution (1.3 per cent) of sodium bicarbonate containing 3 per cent glycerin, is a good nutrient medium for supporting the growth of small numbers of human tubercle bacilli at 37 C. In control laboratory tests and in routine empiric tests with sputums negative on microscopic examinations of smears, the simple tissue substrate microculture has revealed a high percentage of positive results for tubercle bacilli, which recommends the test for this purpose in practice.

FUNDAMENTALS OF ELECTROCARDIOGRAPHIC INTERPRETATION

In this continuation of his discussion of the fundamentals of electrocardiographic interpretations, J. Bailey Carter, Chicago (Journal A. M. A., Oct. 15, 1932), considers auricular extrasystoles, A-V nodal extrasystoles, auricular flutter, auricular fibrillation, ventricular fibrillation, heart block, and partial heart block.

INFECTIOUS MONONEUCLEOSIS

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MUSKOGEE

On July first last year, Dr. H. A Scott asked me to see a patient, C. B., a young man 18 years old. For a week he had been feeling bad. He had a slight sore throat, headache and increased temperature. At the time I saw him the evening temperature was 104. His body showed a few red spots, suggestive of rose spots. The cervical and inguinal glands were moderately enlarged. The spleen was not palpable. The tonsils had been removed some time before. The adenoid tissue on the pharyngeal wall was red but not markedly inflamed. Blood examination showed a white count of 3900 with 45% lymphocytes,, 43% polys, and 12% monocytes. Widal and examination for malarial parasite negative.

Two days later the throat became so sore that swallowing was very difficult. The epiglottis was swollen and red. The interior of the larynx could not be seen. The temperature was still high. White count 8900, polys 52%, lymphocytes 43%. In the fifth the white count was 23,300, polys 28%, lymphocytes 63%. On the sixth, white count 21,000; polys 22%, lymphocytes 74%. The temperature was still high and the soreness of the throat very marked. By the eleventh the total white count had dropped to 16,900, polys 12%, lymphocytes 82%, large mononuclears 6. The temperature began to drop and the patient felt better. The swelling of the epiglottis became less but the lingual tonsil was greatly enlarged. From this time on the soreness decreased steadily and the temperature seldom went above 99. The epigottis remained thick for a considerable time. A white count on July 17, gave a total of 10,800, polys 9, lymphocytes 88 monocytes 3. The patient was feeling well and was discharged on the twentieth. Soon after this he left for the North so that I do not know how long he retained the abnormal leucocyte count.

We diagnosed this case as infectious mononeucleosis. The literature of this disease is not very extensive. Pfiffer in 1899 described a disease which he called glandular fever, which is probably this disease though he did not give the blood findings. In the last few years, a number of papers have appeared and though the condition has been described under a num-

ber of names, infectious mononeucleosis seems to be the name most generally used. The disease begins with malaise, headache, sometimes a chill, fever and sore throat. The fever may be high. The angina varies from a slight redness to a severe inflammation, sometimes with slight ulceration. In a few days cervical and inguinal lymph glands and sometimes the spleen, are enlarged. The glandular enlargmement may be very marked and the glands may appear to be about to suppurate. Suppuration however rarely occurs. The characteristic feature of the disease, is the white cell count. The red cell count and haemoglobin are usually normal. The white cells may number from ten or fifteen thousand up to twenty-five or thirty thousand. In the case reported above, the first white cell count was low—only 3,900. The striking thing is the increase of the mononuclear cells and the relative and actual decrease of the polymorphonuclears. The lymphocytes may reach a percentage of eighty-five or ninety. Most of these cells are of the small lymphocyte type though cases have been reported in which the large mononuclears were the predominating cell. Occasionally immature forms are seen though as a rule only normal forms are found.

The fever persists for from ten days to three weeks. As it falls the patient feels better and his symptoms clear up but some of the glandular enlargement and the lymphocytosis, persist for a long time. The patients suffering from this disease practically always recover. The etiology is unknown. It occurs at times in epidemics in which a large proportion of those exposed contract the disease but no specific organism has been discovered. Inoculation experiments with the various bacteria isolated from the throat and with ground up lymph gland, have failed to transmit the disease to animals. Nothing is known of the pathology beyond the fact that excised lymphnodes show a marked increase in the lymphatic tissue and evidence of increased activity in the germinal centers and lymphoids.

In the epidemic form where there are numerous cases and the physician is on the lookout for them, the diagnosis may be easy. In the sporadic cases the diagnosis is usually not made until the characteristic blood changes develop. It must be differentiated from a number of other diseases in which an increase of lymphocytes occur. Acute lymphatic leukaemia shows a similar lymphocytosis but there are numerous immature forms whereas in infectious mononeucleosis, the cells are mostly of the adult type with comparatively few immature forms. In leukaemia, there is a marked anemia and a marked reduction in the platelets. The pallor prostration and fatal outcome of leukaemia are in marked contrast to the favorable outlook in mononeucleosis.

In agranulocytic angina, there is a great reduction in the total number of leukocytes and the angina is usually of a severe ulcerative type. Whooping cough and measles produce a lymphocytosis but their characteristic clinical features easily clear up the diagnosis.

The laryngologist is the first to see many of these cases because of the angina. Many of them are probably missed because no blood count is made. I feel sure that one of my own cases of apparent peritonsillar abscess falls in this class. This case had the typical faucial swelling and fluctuation and marked enlargement of the cervical glands. Repeated incisions failed to discover pus. No laboratory examination of the blood was made on account of financial reasons. The swelling finally disappeared, the soreness cleared up and the patient returned to normal. I cannot of course be certain that I was dealing with a case of infectious mononucleosis, but I am certain that another such case in my hands will have a white cell count.

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TREATMENT OF MALIGNANT TUMORS: ADVANTAGES OF WEAK HEAVILY FILTERED RADIUM NEEDLES

Charles L. Martin, Dallas, Texas (Journal A. M. A., November 5, 1932), believes that modern developments in radium therapy are based on two facts: first, that radiation of great penetrating power and short wave-length has less necrotizing effect and a greater selectivity for radio-sensitive cells than radiation of low penetration and long wave-length, and, second, that the selectivity of radiant energy for radiosensitive cells is increased when the duration of the exposure is increased with a corresponding decrease in intensity. The implantation of multiple heavily filtered radium needles of low strength over long periods of time increases the margin of safety for normal tissue and causes the rapid regression of malignant tumors of a relatively high grade of radioresistance without sloughing.

FRACTURES OF THE TIBIA

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The tibia may be fractured at any point either with or without an accompanying fracture in the fibula. The fracture may be either transverse, oblique or comminuted, simple or compound. Fractures involving the knee or ankle joints present special problems and will not be discussed in detail here.

One should always strive to obtain as perfect anatomical reduction as possible, but the ultimate object is the restoration of the leg to as nearly normal functional capacity as possible. The type of fracture, the condition of the soft parts and the economic status of the patient should be carefully considered. Unnecessary or questionable procedures should not be employed merely for the sake of beautiful X-ray films.

Repeated, ill-advised manipulations are traumatizing and disturb the formation of callus. In some instances when practiced to excess it becomes a definite factor in the development of delayed or non-union. However, excellent reduction, other things being equal, goes hand in hand with normal function.

When a fracture of the fibula occurs in conjunction with one of the tibia we do not try to secure accurate reduction. Since the bone is not concerned in weight bearing, the position of the fragments matters little as long as the tibia is reduced. When this has been accomplished the fibula will properly align itself.

The public is demanding from us better results in fractures. This is due largely to their familiarity with roentgenograms and also to the higher standard of acceptable results in fracture work.

With these generalities as a basis to work upon we now come to the discussion of treatment. Treatment varies as to the type and location of the fracture. In those cases where the fracture is transverse, the ends of the fragments have notches and irregularities suitable for locking; these are especially favorable for reduction by manipulation, and when once thoroughly locked there is little likelihood of slipping. It is not so important that the fragments be in one hundred per cent apposition as it is that they be definitely engaged and locked and that the normal length be restored. The alignment of the extremity is of equal importance and should be correct. It is surprising the number of poor results which are directly caused by poor alignment. In the normal extremity a line from the anterior superior spine of the ilium bisects the patella and when continued downward should pass between the first and second toes. There should be no posterior bowing of the fragments. A slight amount of anterior bowing will not materially affect function, but if the alignment varies more than a few degrees from normal in either direction, pain and disability may ensue from abnormal stress and strain on the knee and ankle joints. In addition, there is a visible deformity which is conspicuous to the patient and his friends.

In the short oblique fractures there is usually a projecting spur on one fragment which can be locked into the opposite one. In the long spiral oblique type with considerable displacement it is usually impossible to affect a satisfactory reduction by manipulation which will hold. For these, skeletal traction by means of a pin or Kirschner wire through the os calcis with fixation on a Boehler[1] or Braun frame is the treatment of choice. After the fragments have been pulled down to the proper position and alignment, traction is maintained until sufficient callus has formed to prevent slipping. A method of introducing steel pins through the skin into the fragments and incorporating them into a plaster cast after the fracture has been reduced has been described by Orr[2] and appears to be very efficient.

Badly comminuted fractures frequently require traction in order to overcome the shortening and deformity and to maintain correction until sufficient callus forms, after which time a cast may be applied. If it is complicated by being compound, the problem is still more difficult. Loose fragments should not be removed unless they are completely detached. As long as any attachment remains they should be allowed to remain in place even in the face of extensive laceration of the soft structures. Many of these pieces will live and become incorporated in callus and even those which are not viable serve as a scaffold around which new bone is formed, unless they become so badly infected as to be extruded as sequestrae. The unwise removal of pieces of bone in a compound comminuted fracture frequently leads to serious loss of length, loss of continuity,

or the development of a wide gap between the ends of the bone which is very difficult and sometimes impossible to bridge across.

In passing, we should like to stress the value of prompt reduction and thorough, immediate immobilization as preventive measures against infection. We are also opposed to the introduction of metal plates and bands in compound fractures. The danger of stirring up infection greatly outweighs any other value they may have. We do not share the opinion expressed by some men that these cases should have an immediate operation. On the contrary, our experience has been just the opposite. The vast majority will not become infected if they are treated as simple fractures and foreign materials, instruments, probes, etc., are kept out of the wound.

A word should be said in regard to the length of time required for union to occur. There seems to be an impression that one may expect union in six to eight weeks. In the average case from three to four months' time is more often necessary before union is sufficiently strong to enable the patient to bear weight without some form of support. When a condition of delayed union exists, from six months to a year may be required before healing occurs. Experience shows that permanent joint damage following prolonged immobilization is the exception rather than the rule. Even in elderly individuals this is true, and in children and young adults joint changes are rarely seen unless they are the seat of a definite injury.

In conclusion it may be said that treatment should begin as soon after the fracture has been sustained as possible, and ends when union is secured and restoration of function is established. If the condition of the patient permits, reduction should be attempted at once for the following reasons: First, after the extremity becomes swollen from hemorrhage and edema, manipulative efforts are greatly interferred with and the chances of securing a good reduction are materially lessened. The proximity of the bone to the surface renders it adaptable to manipulative procedures and every advantage should be taken of this fact so that one can effect reduction while the fragments are easily palpable and muscle spasm is at a minimum. Second, the quicker the reduction and fixation the less the reaction in the soft tissues and the more rapid the healing.

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DISCUSSION: *Dr. John E. McDonald,* Tulsa.

I think a very essential point in the treatment of this particular type of fractures is early reduction and immobilization, which are the most important things in the treatment of fracture. I have seldom delayed even in compound fractures the immediate reduction of that fracture, getting as good a position as possible. By that we are able to reduce the shock and give nature an excellent opportunity to repair the fracture. I find that if these fractures are properly immobilized, that a large percentage of delayed unions can be prevented.

One thing that ought not to be overlooked and which we used to overlook, is the position in alignment, the position the foot is placed in at the time immobilization is begun. So often we see a foot that has not been sufficiently flexed. A compound fracture requires a longer time than simple fracture, twenty to fifty per cent. That is a point worthwhile to remember. Where there is a large amount of trauma, not infrequently a large hematoma is the real cause of the long or prolonged or delayed treatment. If it is operable, a simple evacuation of the pocket will hasten considerably the treatment and decrease the amount of disability.

Dr. Rountree:

I feel the same way as Dr. Martin, that particularly in compound fractures union is often delayed. We should not be in a hurry to operate these cases. We can put on a weight-bearing cast and let them walk around.

CONGENITAL ELEVATION OF SCAPULA AND PARALYSIS OF SERRATUS MAGNUS MUSCLE

Armitage Whitman, New York (Journal A. M. A., Oct. 15, 1932), describes an operation for the relief of congenital elevation of the scapula and for paralysis of the serratus magnus muscle. One case of each condition is reported. A hitherto unreported complication of the operative treatment of Sprengel's deformity is described. The operation is illustrated by diagrams, and the preoperative and postoperative condition of the patients is shown in motion pictures.

FRACTURES OF THE FEMUR WITH SPECIAL REFERENCE TO THE NECK

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MUSKOGEE

Your attention is respectfully invited to a brief study of fractures of the femur, with special attention to the neck.

Anatomy of—The femur is the longest, largest and strongest bone in the body. In the erect posture, it is not vertical, being separated from its fellow above by a considerable interval, which corresponds to the entire breadth of the pelvis, but inclining gradually downward and inward, so as to approach its fellow towards its lower part, for the purpose of bringing the knee joint near the line of gravity of the body. The degrees of this inclination varies in different persons, and is greater in females than in males, on account of the greater breadth of the pelvis. For convenience of study, the femur is divided into a shaft, and two extremities.

Upper Extremity—The upper extremity presents for examination a head, a neck, and a great and lesser trochanter.

The head of the femur, which is globular, and forms rather more than a hemisphere, is directed upward, inward, and a little forward, the greater part of its convexity being above and in front. Its surface is smooth coated, with cartilage in the recent state, except at a little behind and below its center, where there is an ovoid depression, for the attachment of the legamentum teres.

The Neck—The neck of the femur is a flattened pyramidal process of bone which connects the head with the shaft of the bone. It varies in length and obliquity in various periods of life and under different circumstances. The angle is widest in infancy, and becomes lessened during growth. In the adult, it forms an angle of about 130 degrees with the shaft, but varies in inverse proportions to the development of the pelvis and the stature. The angle is greater in men than in women. It has been stated that the angle diminishes in old age. The neck is flattened from before backward, contracted in the middle, and broader at its outer extremity, where it is connected with the shaft, than at its summit, where it is attached to the head. The vertical diameter of the outer half is increased by the thickening of the lower edge, which slope downward to join the shaft at the lesser trochanter, so that the outer half of the neck is flattened from before backward, and its vertical diameter measures one-third more than the anteroposterior. The inner half is smaller and of a more circular shape.

The Anterior Surface of the neck is perforated by numerous vascular foramina. The posterior surface is smooth, and is broader and more concave than the anterior; it gives attachment to the posterior part of the capsular ligament of the hip-joint, half an inch above the posterior intertrochanteric line. The superior border is short and thick, and terminates externally at the great trochanter; its surface is perforated by large foramina. The inferior border, long and narrow, curves a little backward, to terminate at the lesser trochanter.

The trochanters are prominent processes of bone which afford leverage to the muscle which rotates the thigh on its axis, There are two in number. The shaft of the femur is almost cylindrical in form. It being a little broader above than in the center, and somewhat flattened below. It has three borders and three surfaces.

Lower Extremity—It is larger than the upper, is of cuboid form, flattened from before backwards, and divided into two large condyles or "knuckles" by an interval which presents a smooth depression in front called the trochlea, and a notch of considerable size behind the intercondyloid notch.

Articulation — Os-innominatum, tibia, and patella.

The femur is developed by five centers, one for the shaft, one for each extremity and one for each trochanter. The femur affords attachment for twenty-three muscles. These muscles with the aid of traction serve as splints, so to speak, in treating fractures of the shaft of the femur.

Etiology—Fractures of the neck of the femur have always been a subject of exceptional interest because of its common occurence in elderly persons, its slowness in healing and the difficulties encountered in its treatment. While primarily an injury of old age, it should not be forgotten that it may occur at any age, even in children. Modern transportation and mechancial work of all kinds have revolutionized fractures, not only for the neck of the femur, but of the entire bony anatomy.

In "Wilson and Cochran," one will find the following statement: "In a group of 526 cases of fracture of the femur reported by Speed in 1921, 124, or 24%, were fractures of the neck; while 118 or 22%, were fractures of the base of the neck in the intertrochanteric region. Of these, 96% occurred in persons beyond the age of 50, and 60% of the patients were women."

Causation—In old persons, the injury is generally due to a slight trauma, a misstep, a stumble or fall upon the hip. It has been said that the fracture precedes the fall. The length of the bone, its muscular attachment, the angle of the neck with the shaft, bony changes in old age, and the possibility of hypertrophic arthritis, etc., are causative factors. In the robust adult, it is caused by great violence directly to the trochanter and lateral aspect of the thigh; and fall of great height upon the feet. In children, it is due to fall with hyper-extension of the thigh.

Healing—In the past, healing was thought to be a rare thing in this sort of fracture. Sir Astley Cooper once stated that it never occurred, but later changed his mind. In the recent past, it has been recognized that fractures of the base of the neck unite readily while those nearest the head do so with difficulty. It has been recognized that very commonly the portion of the neck attached to the proximal end becomes absorbed. For this reason and others, one is justified in believing that failure of union is chiefly due to three factors:

1. Insufficient blood supply and senile changes in the bone.
2. Presence of synovial fluid which bathes the fractured surface.
3. Incomplete approximation of the fragments.

Blood Supply—The main blood supply to the head and neck is through the capsule. A small amount may be through the ligamentum teres in early life.

Synovial Fluid— Just why and how this fluid acts in the fractured parts is not known. However, it has been known for a long time that it does prevent union.

Complete Approximation—This is an important factor. It gives back the normal position of the bone, and gives nature a better opportunity to re-estabish the normal blood supply, which is the most important thing in obtaining union.

Types of Fractures—In the recent past, they were termed intra—or extra capsular fracture. This distinction has lost its force. True impaction may be encountered, but is not common.

Diagnosis — History of injury, severe pain, deformity, the leg is adducted and externally rotated. Usually it is found with the outer border lying flat on the bed. All motions of the hip are very free. The great trochanter is displaced upward on the ilium and rotated outward. Shortening of the shaft is in proportion to the amount of displacement. It is important to note, however, that in the type of fracture with a small amount or no displacement, the diagnosis is difficult, in that one finds resistance to motion and little or no deformity. The use of the X-ray by an expert is the key to a correct diagnosis.

Treatment—Treatment should be considered from two standpoints. That of saving life, and that of ultimately restoring function to the hip. The most enthusiastic method of treating these cases at present is reduction under general anesthetic and fixation by the application of a plaster cast. "Spiker of the hip, so to speak," extending from the toes well above the margin of the ribs. This is fine in the robust adult, but in elderly persons the Thomas or Brown's modified Hodgens' splints, to my mind, is the method of choice. Especially the Hodgens', and in passing I will briefly describe the Hodgens' splint. Any blacksmith or tinsmith can make the splint in a very few minutes, if given the dimensions. The material is three by sixteen, brass or iron, or number four wire, all in one piece. The distal extremity is six inches wide and the proximal, eight, the ends of the latter being connected by an arch of such height as to pass well over the thigh. The length over all is thirty-six inches. On the upper side of the frame four loops of smaller wire are placed, those nearer the proximal extremity being nine inches from the end, while those toward the distal extremity are ten inches from its respective end. These loops are for supporting of cords, or straps. Twelve inches from the proximal end of the splint is bent at an angle of about 170 degrees. This angle will allow the limb to assume a position which gives most comfort, viz: that of partial flexion. To the supporting loop are attached adjustable straps with buckles, or

small cord equipped with tent blocks, and are passed through a ring about fourteen inches above the frame. The latter is attached to a rope or sash cord, swung from the ceiling, or some convenient support.

The Hodgens' splint properly applied, tends to reduce the fracture, relieve the pain, permits the patient to sit up in bed, or even in a chair, free motion to the spine, free use of both hands, and the other leg. This unlimited motion will probably afford enough exercise to adequately assist nature to prevent the numerous complications which may arise, such as bed-sores, sloughing, and especially the dreaded hypostatic pneumonia which is, I think, the cause of deaths in most of the fatal cases of fracture of the neck of the femur.

In Treating Fractures of the Shaft, perfect reduction is not near so important. Fair approximation with sufficient traction or extension, one may expect a good result. This is due largely to the abundant blood supply of the shaft. While in the neck, as has been stated, the blood supply is solely from the capsule, and if reduction is not perfected it would be impossible for nature to re-establish the normal blood supply which is necessary to an ultimate recovery.

SUMMARY

1. Perfect reduction.
2. Immobilize as near as possible.
3. Re-establish the normal blood supply.
4. Promote nutrition and other normal functions of the body.

BACTERIOPHAGE AS THERAPEUTIC AGENT IN STAPHYLOCOCCUS BACTEREMIA

W. J. MacNeal and Frances C. Frisbee, New York (Journal A. M. A., Oct. 1, 1932), have produced a staphylococcus bacteriophage which is highly potent against a large majority of bacteria of this species found in infections of the blood stream and have prepared this agent in a nearly protein-free medium. Use of this bacteriophage by external application, by subcutaneous injection and, above all, by intravenous injection in a series of fifteen patients with staphylococcus bacteremia was followed by death in eight and recovery in seven patients. The treatment is not a simple procedure, and the course of the disease leading to recovery is quite prolonged The authors give brief clinical records pertaining to the fatal cases. In conclusion, they state that bacteriophage is a remedial agent which, when carefully and intelligently eomployed, may be expected to assist somewhat in the treatment of staphylococcus bacteremia, a disease that must still be regarded as extremely grave.

DISEASES OF THE THYROID GLAND AND TREATMENT*

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MANGUM

In this discussion of the diseases of the thyroid, I have tried to keep in mind the viewpoint that only a clinical classification that can clearly be grasped by the general practitioner of medicine—and that can be utilized in arriving at a correct and early diagnosis should be considered, leaving the more technical morphological classification to the diagnostic acumen of the pathologist to whom the microscopic classification is more important.

Ever since we became interested in goiter work, we have pleaded for a simple and basically sound clinical classification upon which every clinician, regardless whether he be in general practice or devoting his major efforts to some specialty, can firmly place his diagnostic feet, and, with confidence in his own medical ability clasp hands with his confreres with a feeling of assurance that he is not groping in a miasma of uncertainty.

It has been my belief for some time that the apparent negligency of the general practitioner in recognizing goiter in its early or more intractable stages has been due to the many and different biologic classifications set up by divers authorities who intentionally or inadvertently place around their classification so much minutia of technical description that the average doctor has thrown up his hands in clincal despair, and shied away as quickly as possible, from the conscientious study of goiter. When one stops and reflects upon the amount of highly technical literature pertaining to goiter, that has been written in the past twenty-five years, is there any wonder that the man in general practice has been deterred from giving as much attention to the diagnosis and treatment of goiter as he would like to have done?

However, in recent years the clinical classification of goiter has fallen into more practical and competent hands, namely, the general surgeons, who are more interested in early diagnosis and clinical cures than in highly technical, hair-splitting differentiation.

Now with my object and viewpoint

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made clear, I will go briefly into discussion of the disease of the thyroid gland and treatment thereof.

ETIOLOGY

If there is a specificy of cause for goiter, it is not known. However, there are certain conditions and circumstances that are so concomitant with goiter that we are compelled to give them recognition and consideration. It is well known that residence in certain regions of both this country and Europe is conducive to goiter. In these regions, like the poor, the goiterous patient is always present, and we speak of these localities as "goiter regions." This fact alone has been an incentive to study its causation. The knowledge that goiter does exist endemically in certain regions gave us our first frail anchorage to begin research in its etiology. Some authorities, particularly Bircher of Berlin, have thought that soil containing decomposed fauna and flora furnished the exciting toxin. At one time it was thought that goiters were more numerous in mountainous districts than in valleys and plains, but now we know we have endemic goiters in certain regions of this country, at least, far removed from mountain ranges. Water from limestone bearing strata has long been associated with endemic goiter, but endemic goiter exists where there is no known limestone or lime bearing rocks, but it is known that when the water supply of goiterous regions is changed to a pure or different type, the incidence of goiter is decreased to an appreciable and in many cases a remarkable extent. Hertzler[3] quoting Bircher cites one town in which in 1885 fifty-eight (59) per cent of the population were afflicted with goiter. The water supply was then changed to another source and in 1907 the population was only two and one-half (2½) per cent goiterous. It has not been established whether the suspected water contains a deleterious substance or lacked something essential for the proper functioning of the thyroid.

It is now well known that goiter in children is a deficiency disease and that the addition of iodine to drinking water prevents its occurrence. Therefore one may correctly surmise that goiter in children, at least, is a compensatory hypertrophy, produced by the gland's efforts to supply the deficient iodine.

Again according to Hertzler[3], in early adolescent goiter no hypertrophy of the gland is demonstrable, also that those who drink rain water while living in a goiterous region did not develop goiter. This fact may be confusing as to the causative agent, but nevertheless, chemical analysis has proved that goiterous thyroid glands contain less iodine than normal ones. The United States Department of Agriculture has demonstrated that in certain regions where myxedematous pigs are born, that if food from non-goiterous districts is fed to the sows, normal pigs are born. This indicates a food deficiency. If iodine is fed to pregnant sows, normal pigs are born. While iodine deficiency may account for the development of certain types of goiter, it does not explain why a certain per cent will become toxic and degenerate.

Certain types of infections have been blamed as the causative agent of goiter, and in certain cases this theory seems very poignant, but it fails to explain the age incidence in occurrences in the same family in goiterous districts and also why the goiter fails to develop if the child removes to a non-goiterous district before reaching this age. However, in adult cases of goiter, there is often an associated disease of some of the other organs and it is not at all untenable to suppose that these concomitant diseases do influence the course of the thyroid disease.

CLASSIFICATION AND SYMPTOMATOLOGY

Before discussing the symptoms of thyroid disease, it seems expedient at this point to give you a working classification of thyroid disease. The classification that I give is the one that has been devised and is being used in the Border-McGregor Clinic in Mangum, and one which we believe to be very practical, simple and clinically correct. It is as follows:

Thyroid Disease

1. With goiter (enlargement)
   - a. Toxic
   - b. Non-toxic
     - a. Colloid
     - b. Adenomatous

   } 2

2. Without goiter (enlargement)
   - a. Hyperthyroidism (toxic)
   - b. Hypothyroidism

With the above classification it is obvious that in examining a suspected thyroid case, we look for the presence or absence of enlargement. In the presence of thyroid disease with enlargement absent, we either have a hyperthyroidism (toxic) or a hypothyroidism. If an enlargement of the gland is present (goiter) we have either a toxic goiter or a non-toxic goiter. If non-toxic, it is either colloid or adenomatous. From a clinical viewpoint this is all that is necessary.

Now as to the symptoms *per se*. If goiter (enlargement) is present, to advise us immediately that the gland is diseased, we have only to check the usual symptoms that accompany toxic goiter to ascertain its true clinical status. On the other hand, where the enlargement is undiscernible, or only slightly so, the chance of failing to diagnose thyroid disease, except in experienced hands, is very great, and here is where our diagnostic acumen and powers of correct observation meet the severest test. However, if one will familarize himself with the ever present triad of symptoms of toxic goiter, he will be surprised at the corrected diagnoses he makes in the acutely ill patient that has "shopped" from one doctor's office to another without obtaining relief. This ever present triad of symptoms are exophthalmos, tremor and tachycardia, although in some cases the exophthalmos is so slight as to be often overlooked. Of course if discernible enlargement is also present, you have four cardinal symptoms that are infallible. In addition to this we may have the eye signs, if present, that are also pathognomonic if supported by any of the cardinal symptoms, viz: Von Graefe's (lagging of the upper lid), Stellwag's (lessening of winking), Dalrymple's (widening of the palpebral fissure) or disturbance of convergence.

These symptoms, when considered with a history of easy fatigue, exhaustion, excitability, and nervousness, should make the diagnosis comparatively easy. There are others, more or less constant symptoms, that are of value when correlated with any one of the cardinal ones, but time does not permit going into detail here.

Just a word here as to the symptoms of the hypothyroid case that is less frequently overlooked. However, we see a few such cases yearly. The symptoms being more or less constant and the diagnosis comparatively easy. These patients are apathetic, dull, and listless. They complain of dull frontal headache and chilliness. They are pale and pasty looking, with an apparent edema of the tissues. The face looks swollen and the eyes puffy. The skin is dry and scaly. The hair is dry and often falling out. There is no perspiration. The hands and fingers become pudgy and the feet may swell but do not pit on pressure. The heart rate is slow and the blood pressure low. The metabolic rate is always minus, usually twenty (20) to forty (40). The treatment is thyroid extract.

TREATMENT

As to the treatment of the other forms of thyroid disease, I can give nothing better than quoting from a paper by my associate, Dr. Fowler Border, which was published in the February, 1931, issue of the Oklahoma State Medical Journal. "All goiter (enlarged) types of thyroid disease are potentially surgical, but the time of operating and the preliminary treatment to such a step, depends entirely, of course, upon whether the goiter (enlarged) type gland, is toxic or non-toxic. The second type of thyroid disease cases, i. e., thyroid disease without goiter (enlargement) is either specifically surgical (hyperthyrodiism) or specifically medical (hypothyroidism). This then, is the sum total of all we may need to know for the purpose of scientifically classifying and treating thyroid disease."

1. Hertzler—Diseases of the Thyroid Gland.
2. Further Microscopic Different.

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VAGINAL ENTEROCELE: REPORT OF THREE CASES

According to W. H. Bueermann, Portland, Ore. (Journal A. M. A., Oct. 1, 1932), vaginal hernias are rare. The posterior variety are more frequently encountered. The symptoms are largely those of rectocele or cystocele and are not characteristic. Diagnosis is often not made before operation, and repeated unsuccessful operations may reveal the true nature of the diagnosis. The association of enterocele and rectocele must be considered in diagnosis. Congenital weakness of the pelvic floor and the strain superimposed by pregnancy and delivery are predisposing causes of an uncertain etiology. Vaginal hernia requires surgical treatment governed by the principles set down for the surgical treatment of hernias in general. Complicating pelvic conditions often prevent a standardized technic being observed.

PYELITIS*

HUGH J. EVANS, M.D.
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Pyelitis is the term used for a pyogenic infection of the genito-urinary tract, the kidney proper, the pelvis of the kidney, the ureter or the bladder. This condition is marked by general rather than local symptoms.

It is not a new disease and was first described by Huttenbrenner in 1876. Since then there has been much discussion as to the etiology. It is not questioned that it is more common in girls than boys and in infancy than childhood. It is also granted that the most common organism is the B. coli. Other offenders are the staphylococcus, streptococcus, hemolyticus, pneumococcus, B. proteus, Friedlander's bacillus, B. pyocyaneus, and the gonococcus.

The routes by which the infection reaches the genito-urinary tract is still a debatable question but we feel that there are three possible sources:

1. Hemotogenous route. — This seems most likely because of the association of pyelitis secondary to infection in some other part of the body. This is shown rather definitely by the seasonal maximal incidences, namely, one in February and March, and in August and September. These correspond with the periods of respiratory infection and intestinal disturbances. There seems to be a definite relationship between pyelitis during or following these two types of infection. Pyelitis may also be noted following any of the acute infections.

2. The infection may be transmitted from below. This is borne out by the fact that about 75 percent of infections occur in girl babies.

3. Infection may be spread by the lymphatics. An obstruction of any kind at any point in the urinary tract may or will predispose to infections.

We are not sure just where the pathology is in pyelitis but it is probably in the kidney proper. It is thought that the common lesion is a suppurative interstitial nephritis with secondary involvement of the parenchyma. Whether there is a preliminary capillary damage due to toxins or organisms originating in a focus elsewhere or to vascular stasis or to other causes, is not known. Neither do we know whether it is due to a heightened virulence of the associated organism and a decrease of the patient's resistance, nor what role obstruction plays. The infecting organisms having gained a foothold in the interstitial tissues produce an inflammatory lesion with varying degrees of necrosis. The point at which this process is arrested determines the question of acute or chronic pyuria.

The symptoms are such that there are no specific indications of the disease. In a typical case of pyelitis during the first year, the child usually has a fever of 102 degrees or more, is pale and irritable and has a rather anxious expression. On the other hand the onset follows or is associated with some other infection, most commonly an upper respiratory infection.

In the older child symptoms pointing to involvement of the urinary tract may be absent. Occasionally one may see a child who complains of low abdominal pain with tenesmus or burning on urination or one who has a frequency or a nocturia.

It is obvious therefore that diagnosis of infection of the urinary tract based on symptoms is only presumptive. Unexplained fever and the finding of pus cells in the urine will give us the privilege of calling the condition pyelitis. As far as treatment is concerned there is nothing new. Probably the most important step in treatment is the flushing out of the genito-urinary tract with water. This was emphasized as early as 1876 by Huttenbrenner. All pyelitis cases should have at least a quart of water in the twenty-four hours. If vomiting develops fluids have to be given by stomach tube, proctoclysis, or even subcutaneously or intraperitoneally. The body must and has to have its fluid balance maintained.

Sodium citrate and sodium bicarbonate are of value in alkalinizing and should be given in large doses. That is, enough to render the urine alkaline. Often the alkaline treatment is insufficient and we resort to urinary antiseptics. Methenamine or urotropin has proved to be very effective if given with discretion. Helmholtz advises large doses over a period of three to four days and then leaving off the antiseptic. He uses ammonium chloride in large doses to render the urine acid for only in an acid urine is the formaldehyde generated. This is best accomplished in a urine with a concentration of P. H. 5.5 to

*Read before the Oklahoma State Pediatric Society, May 24, 1932, at Tulsa.

5.0. In large doses of methenamine hematuria often appears. This is not due to a nephritis and will clear up rapidly upon resuming the alkalis and plenty of fluids.

The general nutrition of the patient must be watched and his reserve built up.

In way of treatment it may be of interest to mention the vaccine which some believe is of value. Cline uses a B. Coli bacteriophage filtrate and he has reported favorable results in a small series of cases. Grunow has used a vaccine on a few cases and reports fair results. He has discarded bladder irrigations which he used up to 1920. Ginsberg reports one cure by the use of pituitary extract. His theory is that it increases the tone and incidentally the drainage of the ureters and the bladder.

Some authorities state that all cases of pyuria in male infants are due to some congenital abnormality of the genito-urinary tract, which interferes with drainage. No matter what sex then if we do not get good results with our routine medical treatment in all cases of pyelitis, it is wise to feel that there is a true organic cause and submit the child to a complete urological examination. This includes cystoscopic, ureteral catheter, and the X-ray under the direction of a capable urologist.

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ENURESIS*

C. F. PARAMORE, M.D.
SHAWNEE

Enuresis, or bed wetting, is incontinence of urine or the involuntary discharge of urine, noctural, occurring at night and during sleep and, diurnal, during the day.

In this paper I intend to deal more particularly with the type of cases most often met with in practice, those due to habit or poor management, since these are the most amenable to treatment.

Children begin to form habits very early in life. In the first three or four days they will often learn to cry to be held. Bowel control may be established in two to six weeks, so that the infant will not soil its diaper. Urinary control may be established during the latter part of the first year but the majority of children are trained during their second year. If this is not accomplished during the third year, incontinence may be said to exist.

Enuresis may be due to malformations, organic disease, chemical or mechanical irritations, or to a continuance of the infantile involuntary, as opposed to the normal voluntary adult control.

Congenital malformations may range from vesico vaginal fistulas to complete extroversion of the bladder or to persistence of the urachus.

Organic disease may be of the brain or cord, or systemic disease, (such as anemia, malnutrition, or inherited neuresthenia), that affects the central nervous system.

Meningitis, idiocy, and brain tumor may be causative factors. It also occurs in myelitis, spina bifida and cord injuries.

Inherited neurestheni a causing enuresis is often associated with chorea, hysteria, and epilepsy.

Chemical or mechanical irritations producing enuresis may be ammonium urate or uric acid in the form of sand or small concretions in the urine, stone in the bladder, highly acid urine, and highly concentrated urine. Phymosis, accumulation of smegma, balanitis and narrow meatus may produce sufficient irritation to cause bed wetting. Pin worms, rectal fissures, or polypi may be causative factors.

When there is no definite condition that

*Presented before Pediatric Section, Annual Meeting Oklahoma State Medical Association, May 24, 1932, at Tulsa.

produces irritation, continuance of the infantile involuntary bladder evacuation is due to imperfect training and allowing a neurotic habit to develop, rather than the establishment of cerebral mastery.

Enuresis occurs in all ages, up to puberty and is occasionally seen in adults. It affects both sexes equally.

Enuresis may occur day or night—the majority of the cases, however, are both diurnal and nocturnal.

The type of micturition depends upon the cause. Malformation causes dribbling as the urine is produced. In organic cases the action is purely reflex. Happening before the patient has time to reach the toilet, if he is conscious of the desire. Chemical and mechanical types occur only when there is irritation, and disappear when the cause is removed. The habit type soon becomes wholly or partially reflex, and is usually nocturnal and diurnal early in life but the patient frequenty learns day control after the first few years.

The treatment of malformation cases is surgical repair; in organic disease of brain or cord the condition is usually hopeless. When urine is highly concentrated fluids should be pushed. When uric acid deposits are causative, alkaline should be given. Phimosis with retention of smegma should be relieved by circumcision. Vesical calculi should be removed. When there is a large quantity of urine, with low specific gravity, fluids should be restricted, especially after four o'clock in the afternoon.

In the treatment of enuresis due to habit, management is the most important factor. It is easier to prevent enuresis than it is to cure it. Bladder control, in the infant, is largely the result of habit and nocturnal continence can be promoted by proper management in early infancy. If the baby is aroused several times during the night, to have his diaper changed, he learns to awaken and wet his diaper. This, of course, will contribute to later enuresis. Nursing or bottle feeding, at night, should be restricted and stopped as early as possible. If the child goes to bed every night with a full bladder he is bound to empty it during the night.

In securing the proper management for the child, with enuresis, the first and most important thing is to secure the cooperation of the parents and the patient. Enuresis is only cured by persistent and continued effort on the part of both parent and child, and that over a long period of time.

It must be borne in mind that we are striving to substitute willed urination for involuntary urination. Every willed evacuation of the bladder tends to break down the lower spinal reflex. The whole technique of this training depends on anticipating involuntary urination and substituting willed evacuation, gradually lengthening the interval between urinations, until control is acquired.

In treating cases of enuresis where, after careful examination, I feel the condition is largely the result of bad habit formation, I give the parent a sheet containing the following instructions:

1. Give the child no liquids after 4:00 P.M., except one-half glass of water with supper.

2. Do not let the child run about after 4:00 P. M. It is very important to keep the child quiet. Care should be taken to secure for the child a simple, natural life, free from excitement or over-taxing of the nervous system.

3. Have the child sleep alone and not on its back. The latter can be effected by putting a towel around him with the knot at the back. See that the windows are wide open.

4. Put the child to bed at 7.00 P. M., no later. Be sure the bladder is emptied by a willed evacuation before the child goes to bed.

5. Have the child eat just three meals a day. No feedings at all between meals.

6. Do not let the child eat any candy, cake, ice cream, soda pop or chocolate. Do not give jam, jellies, or syrup. No fruit between meals.

7. Do not let the child drink tea, coffee, cocoa, or meat broths.

8. Do not let the child have salty or highly seasoned foods, such as: pickles, mustard, catsup, or baked beans.

9. Use as little salt on foods as possible.

10. Do not let the child eat meat or egg for supper.

11. Take the child up at exactly 10:00 P. M., and 6:00 A. M., to be sure that he is thoroughly awakened and has a voluntary urination. These hours are varied to meet the needs of the individual child. First the parent should awaken the child

at three hour intervals, (using an alarm clock, if necessary) and a record kept of the times the bed is found wet. When the child will go three hours regularly at night, without voiding, the time is lengthened to three and one-half hours and finally to four hours. In a few weeks the child can usually be trained to hold his urine with only one voiding—at 10:00 P. M. In a few months this can be omitted. The number of cases that can be cured by such simple means is most surprising.

Two points are most important in this method of management.

1. The method must be pursued every night, without any interruption, as any variation sets the treatment back to the beginning.

2. The purpose of arousing the child is lost unless he is thoroughly awakened and the urination is willed.

Corporal punishment is useless and harmful. Rewards are sometimes more effective than other form of treatment. The inspiring of confidence, that the physician will effect a cure, is often the most effective method.

I have found that having the child keep a diary often is helpful. In the morning he takes his note book and writes, "I did not wet the bed last night," when he has had a "dry" night. At the next visit to the doctor the book is presented for his inspection. Perhaps a small prize, given when a certain number of successive "dry" nights have been attained, may furnish additional incentive.

Drugs are, at times, useful as accessories. Atropine is the most effective. For nocturnal incontinence give—1 drop of ¼ grain to ounce solution at bed time. Increase the dose, one drop daily, until results are obtained or reaction to the drug is manifested, by flushing of face and dilatation of the pupils. Strychnine is sometimes advantageous, especially in the diurnal type, I have used these drugs combined in a convenient form of Nu-bar-bel, a Blue Line preparation.

I had one case that responded to minute doses of thyroid.

Intelligent systematic training is the most important measure for the relief of this annoying condition. Practically all cases are amenable to treatment and persistence will usually effect a complete cure.

THE NEGLECTED FIELD OF VAGINO-PERITONEAL OPERATIONS*

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PHILADELPHIA, PA.

Abstract. Many operations now made through the anterior abdominal wall may be more safely performed through a vaginal incision. Certain of these operations may also be done with greater facility by this route. The posterior uterine cul de sac is but a few millimeters from the vagina, with tissue easily punctured or divided, giving the simplest and quickest access to the peritoneal cavity. Such access has the following advantages: (1) The pelvic perineum best resists infection, (2) The most dependent and safest drainage is obtained, (3) Serious secondary reaction or troublesome adhesion is rare, (4) A thick obese abdominal wall is no handicap, and a secondary infection or weakness of the anterior abdominal wall does not result. (5) A postoperative vaginal hernia is almost unknown. The disadvantages of the vaginal approach including the cramped, limited field, poor visibility, and rather difficult access may be overcome by proper position on the operating table, special instruments and illumination, rather rarely, by the division of the vaginal outlet, and especially by technical training and experience.

With the patient properly placed in the high Trendelenberg position and under adequate relaxation from an anesthetic, the loose intestinal coils leave the pelvis and through a vaginal incision the pelvic organs and lower abdominal organs may be inspected. The following procedures lend themselves to this route: Diagnostic exploration; an actopic pregnancy, pus tubes, appendicitis, perforated rectum or uterus, peritoneal or pelvic tuberculosis or malignancy may thus be easily determined. Either an anterior or posterior colpotomy may be used. Through a posterior colpotomy, the pelvic cavity and peritoneum, the uterus, tubes, ovaries, ligaments, perimetrium, the rectum and pelvic colon, and in eighty per cent the vermiform appendix and cecum may be examined. An anterior colpotomy has special advantage in giving access to the posterior wall of the bladder, pelvic portion of the ureters, the round ligaments and the uter-

*From the Surgical Department, Temple University, Philadelphia, Pa. Read at the Third Annual Fall Clinical Conference, Oklahoma City Clinical Society, November 2, 1932.

us and its appendages. Retroversion of the uterus may be corrected through a posterior colpotomy by shortening of the round or utero-sacral ligaments. Through an anterior colpotomy the round ligaments may be shortened, a Baldy Webster type of operation done, or a vaginal fixation of the uterus produced. While the high type of vaginal fixation or vaginal interposition interferes with pregnancy, the low form may be used during the child bearing age. For ectopic pregnancy the affected tube may be pulled through a posterior colpotomy incision and immediately clamped and ligated, arresting the hemorrhage in the simplest, safest manner.

Salpingitis. While an abdominal section is often dangerous and undesirable, in acute or subacute salpingitis, vaginal section done without undue manipulation is relatively safe and usually is followed by rapid convalescence. For a very acute infection, a posterior colpotomy and the simple introduction of a large iodoform gauze drain about the affected appendages is used. This is followed by prompt relief from pain and fever and short period of disability, usually twelve to fourteen days, and a reduced number of sequelae, and it should be selected over the non-operative forms of treatment when the symptoms are prolonged and severe.

In acute puerperal or postoperative salpingitis if there is a diffuse infection of the parametrium, peritoneum and blood stream, the condition is not amenable to operation. Whenever the condition is localized to the fallopian tubes, endometrium, uterus, or pelvic peritoneum, the cul de sac drainage is the safest and most satisfactory operative procedure. For subacute or chronic salpingitis with pus tubes, tubo-ovarian abscess, pelvic abscess, a vaginal drainage, vaginal salpingectomy, or vaginal hysterectomy has the lowest mortality and the least morbidity.

Vaginal Ovariotomy. Many cysts and tumors, even of large size, may be evacuated through a posterior colpotomy, withdrawn, and the pedicle ligated through the vagina. Adhesions may be brought into view, divided, and any bleeding controlled by ligature or suture. Selection of cysts for vaginal removal require judgment and an anterior or posterior colpotomy may be used. Dermoid cysts may be pulled down, gradually evacuated, delivered, and removed. Solid, benign, ovarian tumors up to the size of a grapefruit may be brought into the vagina and with or without morcellation, removed.

Vaginal Myomectomy is feasible even for relatively large fibroid tumors of the submucus, interstitial, or subserious variety. For the growths within the uterus it may be necessary to split the posterior or anterior uterine wall to gain access.

Vaginal Hysterectomy has a lower mortality and a shorter period of disability than any other method of removing the uterus. Fibroid tumors extending even above the level of the umbilicus may be removed by morcellation. The best results in the treatment of cancer of the uterus have been reported from vaginal hysterectomy followed by radium applications.

Vesico-vaginal and recto-vaginal fistulae may be more efficiently handled when the parts are well mobilized through an anterior or posterior colpotomy. We have encountered no fistulae which could not be closed by such a maneuver irrespective of previous failures. Very fine silver wire remains a most desirable material for suture.

The lower ureter is best exposed through an anterior colpotomy. Calculi may be removed, strictures divided or excised, fistulous openings turned into the bladder, or an anastomosis between the ureter and bladder made through such an incision.

Appendectomy may be performed through the vagina in about eighty per cent of patients. Low-lying appendiceal abscesses may be well drained through the vagina.

Rectum. Perforation of the rectum as well as of the uterus may be localized and occluded through a vaginal incision. Affected areas may thus be isolated, sutured or drained by gauze packing with the least danger of general peritoneal contamination. A ruptured bladder may likewise be sutured through an anterior colpotomy. In selected cases a vaginal ileostomy is feasible and effective for intestinal obstruction. When rectal cancer involves the prosterior vaginal wall, this should be resected with the growth. The vaginal incision, as pointed out many years ago by Murphy, facilitates the extirpation of low-lying malignant tumors of the rectum.

Sterilization may easily be done through an anterior colpotomy, the fallopian tubes being resected, the cornu of the uterus excised, or other type of operation being used.

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Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal the manuscript will be returned to the writer.

Failure to receive The Journal should call for immediate notification of the editor, 810 Manhattan, Building, Muskogee, Oklahoma.

Local news of possible interest to the medical profession, notes on removals, changes in address, births, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds unapproved by the Council on Pharmancy of the A. M. A., will not be accepted.

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EDITORIAL

1933 DUES NOW PAYABLE

This is to again call the attention of our membership to the fact that dues for 1933 are payable during January, and the earlier in the month they are paid the better. We are receiving some dues directly from the members. These should be paid through the county secretary, then the records of his office and our office coincide, for he keeps, or is supposed to keep, a carbon copy of every remittance so that there can be no misunderstanding as to who has or has not paid for the current year. As the dues in counties vary greatly we are unable to say what amount to accept, so it is obvious that it is best to pay through your county secretary.

—o—

THE ANNUAL MEETING FOR 1933

This meeting will be held at Oklahoma City, headquarters and all features of it at the Skirvin Hotel, on May 15, 16, 17.

The first day will be devoted to the meeting of the Council, and House of Delegates. Possibly other organizations and features may also meet upon that day, but upon that we have not yet been advised. The plan now is that the two General Sections, to which distinguished out of State men have been invited and accepted, and others, will make up the program for the mornings of the 16th and 17th, while the Sections will be heard on the afternoons of the 16th and 17th. It is to be understood that this arrangement, at this time, is tentative and subject to change.

The object in making this announcement now is to suggest that all those who desire to prepare papers for the Annual Session should at once take it up with the Section in which they think their paper properly belongs. These section officers will be found listed in the back of each Journal and the sooner they know who will make up their program, the earlier it may be published in the Journal.

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GOITER—A PROBLEM FOR EVERY PHYSICIAN

Probably 90 per cent of the members of the Oklahoma State Medical Association are engaged more or less in general practice, though some of them may particularize along certain lines. Aside from eye, ear, nose and throat men there are not many devoting themselves strictly to any one specialty and these are probably limited to X-ray and radiology and its various phases, dermatology and urology and genito-urinary diseases. Of course there are some others who limit themselves to special lines or work, but the point is that the mass of our members are general practitioners. This statement is called attention to on account of an article appearing in this issue, "Diseases of the Thyroid and Treatment," by Dr. Frank H. McGregor, Mangum. While we are not considered in the "goiter area," nevertheless in the aggregate there are many cases of goiter found each year scattered over the state

and it is regretable to say that these cases are often treated, not for their goiterous condition, but for any one of the many complex symptoms which may be more evident. The further point is that goiter is therefore a problem of all medical men and should be remembered upon the first examination of every patient unless the case is obviously some other thing, an injury, or acute infection.

The classification which Dr. McGregor has laid out is practicable, easily understood and brushes away a great deal of the confusion so often found in the writings of various men upon these subjects.

REPORT OF THE COMMITTEE ON COST OF MEDICAL CARE

After reading various phases of the report and recalling the peculiar psychological makeup of the committee (we do not question their outstanding ability) one is inclined to be as much at sea as ever. The committee made both a majority and minority report, and until a further study convinces us otherwise we would be inclined to favor the minority report, formed principally by Dr. Olin West, Secretary of the American Medical Association; George E. Follansbee, Chairman of the Judicial Council; M. L. Harris, a former President of the American Medical Association and for many years a member of the Judicial Council; and Drs. A. C. Christie, Kirby S. Howlett, A. C. Morgan, Robert Wilson and N. B. Van Etten. It is also to be noted two members representing the dental profession filed a separate and minority report.

We agree with Dr. Lewellys F. Barker, Baltimore, that there is something wrong in a country where provision is not made for eighty per cent of the people whose incomes are insufficient to supply them with proper medical care during serious illness. But the majority report instantly brought severe criticism from a number of great, and supposedly well informed editorial writers, the New York Times, Washington Star, Boston Transcript, New York Herald Tribune, New Haven Register, being the leaders. Apparently all of these papers are under the impression that the majority report smacks too much of socialism, or possibly more than that—Sovietism — the latter being profoundly worse.

We think it well worth while for every physician in Oklahoma to read a communication from Dr. A. E. Hertzler, which will be found in the December issue of the Journal of the American Medical Association, page 2202. We all know Dr. Hertzler to be a practical man, closely in touch with the very severe problems confronting the poor of the middle West. We agree thoroughly with his idea that too many great, tremendously subsidized hospitals have been built, probably where they are not needed, while the smaller hospital has been neglected. Incidentally we think there is room yet for many small hospitals, even if they have only a few beds, in many localities in Oklahoma. But to bring that about the physicians in those localities must get together, lay aside possible personal prejudices and offer to the people a type of treatment and hospitalization commensurate with the means of that particular locality.

At this time even the formerly fairly well to do find it impossible or difficult to pay a physician or surgeon a material sum of money, nevertheless the doctor, as a rule, will be found giving them every possible care. We are certainly confronted by a serious condition in this respect, however, we do not, under any circumstance, wish to have foisted upon the medical profession the panel system, such as has been enforced in England for many years. We hope never to see the day when that strong relationship between the patient and doctor will disappear by some fool experiment. We do think however that the doctor should be prepared to render his patient the best modern service obtainable.

CANCER INFORMATION

The American Society for Control of Cancer has issued a number of booklets upon various phases of cancer which will be sent gratis to any county medical society. It is stated that 640 county medical societies in the middle south and southwest are using this program. The projector, films, ten sets of slides and the transilluminator will be furnished to our State Committee on Cancer Control and routed through the University Extension Department, Mr. L. W. Kibler, Director, Norman.

While the communication does not so state it is assumed that these will be furnished in the order in which they are requested.

Editorial Notes—Personal and General

DR. E. MARGO, Oklahoma City, is reported ill with influenza.

DR. SHERWELL G. WEBER, Bartlesville, sustained a broken leg while hunting quail on the Weber farm, near Dewey.

DR. W. J. WHITAKER, Pryor, who has been confined to his home for the past two weeks with influenza, is reported improving.

DR. A. R. LEWIS, Oklahoma City, is suffering a fractured right hip and shoulder, received when he slipped and fell on the ice.

DR. J. S. FULTON, Atoka, attended a meeting of North Texas Medical Association in December. Dr. Fulton joined that Association when it included Indian Territory members 42 years ago.

POST GRADUATE MEDICAL STUDY, fostered by the State University Extension Department and the State Medical Association, reports attendance as follows: Oklahoma City 45; Okmulgee 19; Muskogee 47; Tulsa 83 and Ada 21.

PONTOTOC COUNTY MEDICAL SOCIETY elected the following officers for 1933 at their regular meeting in December: President, Dr. C. F. Needham; Vice-President, Dr. Ernest A. Canada, Ada; Secretary, Dr. Hervey A. Foerster, Ada.

HUGHES COUNTY MEDICAL SOCIETY elected the following officers for 1933, at their meeting held in December: President, Dr. W. L. Taylor, Holdenville; Vice-President, Dr. H. S. Hamilton, Dustin; Secretary, Dr. G. W. Diggs, Wetumka.

LeFLORE COUNTY MEDICAL SOCIETY met at Poteau, December 8th, and elected the following officers for 1933: President, Dr. G. R. Booth, LeFlore; Secretary-Treasurer, Dr. W. M. Duff; Spiro; Delegate to annual meeting, Dr. W. R. Shippey, Wister.

LINCOLN COUNTY MEDICAL SOCIETY elected the following officers for 1933 at a meeting in Chandler, in December: President, Dr. F. D. Brown, Sparks; Vice-President, Dr. John Cassidy, Chandler; re-elected Secretary, Dr. C. W. Robertson, Chandler.

TULSA COUNTY MEDICAL SOCIETY elected the following officers for 1933, at their December meeting; Dr. Charles H. Haralson, president; Dr. Victor Allen, vice-president; Dr. Carl F. Simpson, secretary-treasurer, re-elected; Dr. R. N. Smith, elected President for 1934. All of Tulsa.

MUSKOGEE COUNTY MEDICAL SOCIETY met with the Sebastian County Medical Society of Arkansas, at Muskogee, December 12th. A very interesting program was delivered by the Sebastian County members. This meeting will be duplicated in Ft. Smith, Arkansas, with Muskogee County Society as guests in 1933.

GARVIN COUNTY MEDICAL SOCIETY elected the following officers for 1933, at their meeting in December: President, Dr. Ray H. Lindsey; Vice-President, Dr. W. P. Greening; Secretary-Treasurer, Dr. John R. Callaway, all of Pauls Valley; Dr. R. M. Alexander, Paoli, censor; Dr. N. H. Lindsey, delegate to the state convention, Pauls Valley.

BRYAN COUNTY MEDICAL SOCIETY elected the following officers for 1933, at their meeting in December: President, Dr. W. A. Houser, Durant; Vice-President, Dr. H. B. Fuston, Bokochito; Secretary-Treasurer, Dr. J. T. Wharton, Durant; Censors, Dr. G. C. Price, Durant; Dr. Fuston, Dr. D. Armstrong, both of Durant; Delegates to annual session, Drs. J. L. Shuler and B. B. Cooker, Durant.

EXTENSION DIVISION OF THE UNIVERSITY OF OKLAHOMA gave a lecture course on Obstetrics and Gynecology in Muskogee, December 7, 1932. This course was also sponsored by the Oklahoma State Medical Association. The program consisted of Drs. Lewis Rudolph of Chicago; R. J. Crossen, St. Louis, and Dr. Reinberger, Memphis, Tenn. These men made an excellent team on these subjects and very practical lectures were enjoyed by all.

WOODS-ALFALFA COUNTY MEDICAL SOCIETY met at Cherokee, November 29th, and elected the following officers for 1933: President, Dr. D. B. Ensor, Hopeton; Vice-President, Dr. A. E. McGrew, Beaver; Secretary, Dr. O. E. Templin, Alva. Dr. Hissem of Wichita, read a paper on "Transurethral Prostatectomy," and Dr. C. B. Barker, Guthrie, read a paper on "The Suppurating Ear." Both papers were illustrated by slides and moving pictures.

OSAGE COUNTY MEDICAL SOCIETY elected the following officers for 1933: President, Dr. C. H. Guild, Shidler; Vice-President, Dr. C. W. Williams, Pawhuska; Secretary-Treasurer, Dr. M. E. Rust, Pawhuska; Delegates to state convention, Drs. Divonis Worten, Pawhuska, and C. K. Logan, Hominy; Alternates, Drs. B. F Sullivan, Barnsdall, and Roscoe Walker, Pawhuska; Board of Censors, Drs. C. H. Guild, Pawhuska; T. J. Colley, Hominy; P. H. Hemphill, Pawhuska.

WESTERN OKLAHOMA MEDICAL SOCIETY met December 20th at the State Sanitorium, Clinton, and the following program was given:

"Prostatic Resection vs Prostatectomy," Dr. J. Z. Mraz, Oklahoma City.

"Some Diagnostic and Therapeutic Pulmonary Problems," Dr. L. J. Moorman, Oklahoma City.

Humorous Paper, Dr. Fowler Border, Mangum.

"Head Injuries," Dr. McLain Rogers, Clinton.

Paper on "Endocrinology," Dr. Henry H. Turner, Oklahoma City.

WASHINGTON COUNTY MEDICAL SOCIETY met December 14th and elected the following officers for 1933: President, Dr. F. S. Etter, Bartlesville, Dr. G. W. Crawford, Dewey; Secretary, Dr. J. V. Athey, Bartlesville; Treasurer, Dr. E. E. Beechwood, Bartlesville; Delegates to the state convention, Drs. J. P. Vansant, Dewey; J. G. Smith, Bartlesville; Alternates, Drs. H. C. Weber, Bartlesville; S. M. Parks, Bartlesville; Censor, Dr. C. C. Wilson, Bartlesville. The above officers were installed at a banquet held January 10th.

MUSKOGEE COUNTY MEDICAL SOCIETY met January 9th and the following program was heard:

President's Address—C. V. Rice, Muskogee.

"Modern Ideas About Eczema,"—James Stevenson, Tulsa.

"Empyema,"—P. P. Nesbitt, Tulsa.

"Pertinent Points on Muskogee County Medical Society in its relationship to its membership and organized medicine,"—R. N. Holcombe, Muskogee.

The following officers were elected at their December meeting: Dr. C. V. Rice, president, Muskogee; Dr. C. E. White, vice-president, Muskogee; Dr. Shade D. Neely, secretary, Muskogee.

MUSKOGEE COUNTY MEDICAL SOCIETY adopted the following resolution at their meeting, December 12, 1932:

Resolution: Mr. President, I make the following motion: "That the Muskogee County Medical Society goes on record as favoring the introduction in the Legislature as soon as can be feasible, thru its Representatives and Senator, a Basic Science Bill, which will provide, that an examination in the basic sciences of anatomy, phsysiology, chemistry, pathology, hygiene and bacteriology must be taken by every candidate for a license to practice any form of the healing art in the State of Oklahoma.

"That a copy of this resolution be sent to the President and Secretary of the Oklahoma State Medical Association, the Secretary of the Okmulgee-Okfuskee, Tulsa, Oklahoma, Garfield, Pittsburg, and Pottawatomie County Medical Societies, and to the Representatives and Senator of this District. That our delegates to the 1933 Oklahoma State Medical Association be specifically instructed to see that this resolution gets before this body for consideration."

Signed,
SHADE D. NEELY,
Secretary Muskogee County Medical Society.

Resolution seconded by Dr. Halsell Fite, passed unanimously.

States that have passed this bill: Washington, Minnesota, Nebraska, Arkansas, Connecticutt, District of Columbia, Wisconsin.

DOCTOR D. L. CONNELL

Dr. D. L. Connell, Picher, died November 3rd, after a brief illness, death resulting from bronchial pneumonia.

Dr. Connell was born at Elden, Missouri, in 1871. He graduated from St. Louis College of Physicians in 1910.

He is survided by his wife, and son, Dr. Matt Connell, and three sisters.

Funeral services were in charge of the Masonic Order with interment at Picher.

FRANK LIPSCOMB WATSON

Frank Lipscomb Watson, born November 3, 1872, Jackson County, Missouri, died December 21, 1932, at his home in McAlester. Dr. Watson grew to manhood in and around Kansas City, Missouri. He was employed for a time in the Kansas City postoffice and received his medical degree in 1899 from the University Medical College of Kansas City.

He then came to Alderson, Indian Territory, where he established his practice and became associated with Dr. O. W. Rice, which firm cared for the extensive medical and surgical interest of that important mining district. During that year he married Mrs. Emma A. Cunningham, who with four children, Miss Maurine, Miss Helen, Mrs. Alma Newton and Mr. Frank Watson, survive.

Since 1913, Dr. Watson has lived in McAlester, where he limited his practice largely to surgery. He was a member of the Christian Church and affiliated with the South McAlester Masonic Lodge No. 96 A. F. & A.M., and Indian Consistory No. 2. He was a member of the County, State, Southern and American Medical Association and on the staffs of St. Mary's Infirmary and Albert Pike Hospital. He was secretary of the Pittsburg County Medical Society continuously for 15 years except in 1926, when he served as president.

WHEREAS, Dr. Frank Lipscomb Watson passed away on December 21, 1932, the Pittsburg County Medical Society desires to express through its committee appointed at a special meeting, its sincere sympathy to the bereaved family.

The committee realizes how futile it is to express or to assuage the grief felt at such moments, but it hopes that assurance of very high appreciation of the man and the pleasant associations of many years standing and the faithful performance of difficult and tedious duties while secretary of the society shall long be cherished and remembered.

Because the Committee feels the loss of Dr. Watson's fellowship keenly, therefore, be it resolved that this resolution be made a part of the minutes of permanent record of the Pittsburg County Medical Society, and that a copy be tendered to the family and made a part of a notification to the State Medical Journal.

Respectfully submitted,

JAMES C. JOHNSON, M.D.,
Chairman,

L. S. WILLOUR, M.D.,

T. H. McCARLEY, M.D.

THOMAS CLAY SANDERS
1876-1932

At the little town of Lonoke, Arkansas, Thomas Clay Sanders was born, October 19, 1876. He received his early schooling in the public schools of his home, and later graduated in medicine, from Louisville Medical School.

He married Miss Genevieve Larchmiller and to them was born one child, Miss Eleanor.

While he was small of stature he was endowed with an inexhaustible energy. He was interested in diseases of children and public health, having devoted fourteen successive years to public health of the city of Shawnee. He was uncompromising in enforcing rigid public health laws and rules. All contagion received the same consideration; whether in the homes of friends or enemies. He frequently suffered the loss of friends and professional income in requiring rigid observance of quarantine laws. He spoke and wrote much on clean obstetrics and was an untiring prosecutor of illegal abortionists.

During his entire professional career he devoted much time to organized medicine, both county and state; having been secretary and president of Pottawatomie County Medical Society and Chairman of the Pediatric Section of Oklahoma State Medical Association. His home was his office and his farm his work.

His work was almost unvarying in its sameness, yet he kept abreast with progress. He hated shams of all kinds and was fond of exposing them.

In his passing the doctors lost a friend, the people a faithful guardian, the community a patriot and his wife a scrrificing husband.

G. S. BAXTER, M.D., Chairman
J. E. Hughes, M.D.
J. M. BYRUM, M.D.
Committee.

DOCTOR GUY W. TAYLOR

Dr. G. W. Taylor, pioneer physician of El Reno, died December 18th.

He was born at Chireno, Texas, August 14, 1860. His preliminary education was obtained in the common schools, graduating from the Memphis Hospital Medical College, March 1, 1887. His license to practice was issued October 21, 1897, Canadian County, Oklahoma Territory.

Dr. Taylor has been a resident of El Reno for the past 34 years.

He is survived by his wife, a son of New York City and three brothers and a sister.

RESERVE OFFICERS TRAINING, WASHINGTON UNIVERSITY

From February 12 to 25, 1933, there will be a training period for Medical Department Reserve Officers of the Army and Navy, made possible at the University of Washington Medical School, St. Louis, Missouri, by the courtesy and enthusiasm of the faculty of this school in cooperation with the Medical Departments of the Army and Navy.

While this is classed as an "inactive duty period" and is without pay or allowances to the participants, the time spent is recognized for the same credits as though it were an "active duty" period. The exceptional clinical advantages of this great medical center, combined with the advanced military and naval training, make possible a very profitable two weeks. The training is open to all Medical Department officers of the Army and Navy reserves, or the National Guard.

The program of the clinics will be under the direct supervision of the faculty of the Washington University. The military instruction, which for the first time includes instruction with reference to the medical service of the Navy, will be under the direct supervision of Colonel George A. Skinner, Medical Corps, United States Army, Corps Area Surgeon, assisted by Lieutenant Commander Reuben H. Hunt, Medical Corps, United States Navy.

Applications for attendance should be forwarded to the Surgeon, Seventh Corps Area, Omaha, Nebraska.

REGIONAL ILEITIS: PATHOLOGIC AND CLINICAL ENTITY

Burrill B. Crohn, Leon Ginzburg and Gordon D. Oppenheimer, New York (Journal A. M. A., Oct. 15, 1932), describe, in its pathologic and clinical details, a disease of the terminal ileum, affecting mainly young adults, characterized by a subacute or chronic necrotizing and cicatrizing inflammation. The ulceration of the mucosa is accompanied by a disproportionate connective tissue reaction of the remaining walls of the involved intestine, a process which frequently leads to stenosis of the lumen of the intestine, associated with the formation of multiple fistulas. The disease is clinically featured by symptoms that resemble those of ulcerative colitis, namely, fever diarrhea and emaciation, leading eventually to an obstruction of the small intestine; the constant occurrence of a mass in the right iliac fossa usually requires surgical intervention (resection). The terminal ileum is alone involved. The process begins abruptly at and involves the ileocecal valve in its maximal intensity, tapering off gradually as it ascends the ileum orally for from 8 to 12 inches (20 to 30 cm.). The familiar fistulas lead usually to segments of the colon, forming small tracts communicating with the lumen of the large intestine; occasionally the adbominal wall, anteriorly, is the site of one or more of these fistulous tracts. The etiology of the process is unknown; it belongs in none of the categories of recognized granulomatous or accepted inflammatory groups. The course is relatively benign, all the patients who survive operation being alive and well.

ABSTRACTS • REVIEWS • COMMENTS AND CORRESPONDENCE

UROLOGY and SYPHILOLOGY

Edited by Dr. S. D. Neely, M.D.
Muskogee, Okla.

A Clinical Evaluation of Transurethral Resection of the Prostate. W. Calhoun Stirling, Medical Annals of the District of Columbia, October, 1932.

The author states that indications for resection over prostatectomy are definite and clear cut, including all minor obstructions at the vesical outlet. In large, vascular, intravesical types prostatectomy should be the method of choice. Resection has great possibilities in detecting and resecting them early, thus obviating the impairment of the vital systems. Resection saves the patient considerable time and money, the average stay in the hospital, he states, is ten days. Resection is a highly technical procedure and should be undertaken only by those capable of handling any surgical procedure which may ensue. Resection is only an adjunct to prostatectomy, will not replace it, and the same careful preparation is required in both types of treatment.

The Management of Prostatic Obstructions by Endoscopic Revision. Joseph F. McCarty, New England Journal of Medicine, August, 1932.

Quoting, "I think it may justly be claimed that with the equipment previously mentioned, we have the means of revision at will of prostatic obstructions in at least 80% of prostatic fibroses, hypertrophies and maligancies, that until quite recently have been done by open operation, that the technique is more surgical and more than is that of digital enucleation, that in skilled hands its mortality is negligible, its hospital domicile is brief —averaging from five to ten days—the rare case a few days longer. Its post hospital morbidity is notable for its absence, and finally it opens up that much wider and more hopeful field of relief of prostatism at its incipiency. These individuals may thus be spared that vicious cycle of secondary changes which have heretofore militated against the comfort and economic usefulness of a considerable proportion of men in their early fifties, when their mental capacities is at its peak.

The Correction of Vesical Neck Obstructions by Means of Resectoscope. Nelse F. Ockerblod Journal of the Missouri State Medical Association, September, 1932.

This author states that in his opinion resection can care for 60 to 70% of vesical neck obstructions. The results will be permanent, it should be confined to the most skilled instrumentalists. The casual cystoscopist must stay out of this field. He does not state whether it is less or more dangerou than a two stage prostatectomy. He believes it will completely supplant perineal prostatectomy. It will never be more than a supplement to the two stage prostatecomy. It is the best method of closed operations upon the bladder neck because of the complete visualization of the structures to be resected. Contraindications he adds are, infected prostate, infected bladder that cannot be cleared up by catheter drainage, complications such as stone in the bladder, papilloma, or diverticulum, the length of time necessary to perform the operation, the prolonged period of infected urine following the operation, the danger of delayed hemorrhage.

Observations on the Treatment of Acute Gonorrheal Urethritis. Meyer M. Melicow, New York State Journal of Medicine, August, 1932.

The author states that there is no specific cause for the gonococcus. Acute anterior urethritis tends to be self limited. Gentle treatment and mild antiseptics are best. Excessive and irritating local treatments are largely responsible for the development of posterior urethritis with the resulting complications which prolong the case indefinitely. The gravity apparatus is unnecessary. The insertion of a cotton plug in the urethra is definitely harmful. The complications of gonorrhea have a tendency to get well if treated gently. However, owing to poor drainage, susceptibility to secondary infections, and inaccessibility to local treatment chronicity is inevitable in most cases. While evidences of cure of acute infection are indirect and negative, they should always be obtained and the patient should be instructed in the significance of the tests.

SURGERY AND GYNECOLOGY

Abstracts, Reviews and Comments from
LeRoy Long Clinic
714 Medical Arts Bldg., Oklahoma City

Purulent Pneumococcal Pericarditis Cured by Epigastric Pericardotomy (Pericardite Purulente. A Pneumocoques Guerie Par Pericardotomie Epigastrique) by Ed Benhamou and P. Goinard, La Presse Medicale, October 5, 1932.

After remarking that pneumococcal pericarditis is not often cured because of failure to recognize it, or errors in operation, the following case is reported:

A well-sinker, 25 years of age, entered hospital January 28, 1930, because of left broncho-pulmonary congestion, fever and other evidences of infection. The illness had begun about fifteen days before, after a long bicycle trip, with a temperature of 104 (40 C.), accompanied by delirium, but without a "stitch" in the chest, cough or expectoration. After the onset the temperature was lower, and there seemed to be some improvement, but at the end of eight days the fever went up again, there were irregular chills, diffuse pains

in the chest, about the loins, and in the neck; and there were cough, expectoration and dyspnoea.

When first examined in hospital patient was sitting in bed, bent forward and face flushed. There was dyspnoea and delirium. Coughed only occasionally with abundant expectoration, purulent at bottom, frothy on top. Pulse 100—good quality. Temperature 100 to 102½ (38 to 39 C.). A little dullness right posterior chest, most in inferior third, with some diminution of the respiratory sounds. Posterior left lung same signs on percussion, but there were subcrepitant rales with some small bubbles throughout, more at base.

Heart appeared to be a little large. Traube's space sonorous. No Ewart sign (prominence of first rib). No Rotch sign (dullness right fifth intercostal space.

Heart sounds approximated normal. No friction sounds. No evidences of lesions about ori, fices. B. P. "au Vaques 11-7" (110-70). W. B. C. 26,000, polys. 88, monos. 4, lymphos 8.

Blood culture negative.

Sputum showed common bacterial flora without predominance of pneumococci.

The following day the evidences of infection more pronounced, pulse more rapid, temperature higher, tongue saburral and dry. The physical signs in the chest remained about the same.

A teleradiograph, January 30, 1930, showed both lungs clear, but an increase in the size of the cardiac area. The left border of the heart beat regularly, the right border was immobile.

On February 6th another teleradiograph showed slight increase of heart shadow, but no additional physical signs.

During the last half of February there were, in addition to cough and expectoration, more distinct evidences of cardiac weakness.

A teleradiograph made on March 5th showed great increase of cardiac shadow. About this time, on the assumption that there was a suppurative pericarditis, a puncture of the pericardium with a large trocar was made, but without recovery of fluid.

On March 6th epigastric pericardotomy was performed by G. Goinard under local scurocaine anesthesia, following the hypodermic injection of one centigram of morphine 15 minutes before.

Mid-epigastric incision about 5 cm. extending over front of lower xiphoid. The 7th costal cartilage partially sectioned at its union with sternum. Peritoneum pushed back, separated by finger, the pericardium approached across the left anterior pillars of the diaphragm, always with the finger (toujours au doigt). The pericardium is recognized by pulsation and resistance. The fibrous sac is partially sectioned by curved scissors upon a fold made by catching and slightly lifting with forceps. At this point a closed hemostat is gently pushed through. Escape of thick pus. Bacteriologic examination showed pneumococcus.

Opening enlarged by spreading forceps. More than 700 c.c. of pus was permitted to escape gradually, suction being employed at the last. The pus was principally in front, below and to the right of heart. It was limited to left and behind by firm adhesions.

Two large drains are left to the right and in front of the heart, and a wick underneath them to protect the contiguous leaflet of parietal peritoneum. The drains were gradually shortened, but not completely removed until a month after operation.

Improvement of the patient was gradual and progressive. He was discharged in good condition April 9, 1930.

The final conclusion of the authors is that there was no important pathology in the lungs—that the trouble from the beginning was probably a pneumococcal pericarditis.

In discussing the diagnostic difficulties attention is called to the value of frequent X-ray examination to determine the size of the cardiac shadow.

The dangers of puncture of the pericardium is definitely emphasized.

Comment: If one bears in mind that pus or other fluid in the pericardium produces a triangular area of dullness with the base down, one does not have much trouble in determining whether the pericardium contains fluid.

I agree entirely with the authors about the dangers in connection with blind puncture of the pericardium. Deliberate pericardotomy under local anesthesia is infinitely safer.

—LeRoy Long.

Two-stage Abdominoperineal Removal of Cancer of the Rectum. Frank H. Lahey. Surgery Gynecology and Obstetrics, November, 1930.

The plan of procedure described was worked out in the Lahey Clinic to meet what seemed to be certain defects in already existing operative schemes in the two-stage abdominoperineal management of cancer of the rectum. Dr. Lahey does not claim originality for this plan, but has found it to be extremely satisfactory in his hands when dealing with these serious risk cases.

The steps of the technique are as follows:

A median incision is made between the pubes and the umbilicus, and the field is investigated for metastases and to determine the operability of the rectal growth. If the growth is operable, the sigmoid is pulled out upon the abdominal wall and the lowest point well above the growth which will reach just above the skin level of the abdominal wall at the pubic end of the abdominal portion of the wound is noted. The mesenteric peritoneum on either side of the mesentery from the sigmoid down to the promontory of the sacrum is cut, and all the vessels in the mesentery of the sigmoid from the bowel itself down to the superior hemorrhoidal vessels, but not including them, are ligated.

Midway between the umbilicus and the left anterior superior spine, a small counter incision is made, through which the permanent colostomy is to emerge. Through this incision a long handled Ochsner clamp is passed and the sigmoid or high rectum is grasped at the point at which its peritoneum has been cut and the mesenteric vessels ligated. Within the original median incision, another Ochsner clamp is made to grasp the sigmoid just below the first Ochsner clamp, and the bowel between the two is severed with a cautery which also sterilizes both ends of the bowel. The bowel and its mesentery are thus divided down

to the promontory of the sacrum, but the superior hemorrhoidal vessels remain intact and nourish the lower segment of rectum. The two leaves of mesenteric peritoneum on either side of the divided mesentery of the sigmoid are sutured together with continuous fine catgut to cover the raw surfaces to which small bowel might become adherent during the interval between the first and second operative stages.

The Ochsner clamp and with it the upper segment of sigmoid included in its grasp are withdrawn through the proposed colostomy opening. A few stitches are placed in the parietal peritoneum of the colostomy incision about the colon, also a few in the fascia and skin until the wound fits snugly, but without constriction about the end of the colon. No stitches are placed in the colon itself because of the fear of penetrating the bowel with leakage and later wound infection. The Ochsner clamp is left in place in the dressing and is not removed until the colostomy is to be opened. This loop of colon should not be too short and too direct to the abdominal wall, but a considerable loop of bowel should be left beneath the colostomy to serve as a fecal reservoir.

The mesentery of the upper loop of colon serving as a colostomy is now sutured to the parietal peritoneum of the left iliac fossa to prevent herniation and strangulation of the small bowel about the colon going to the colostomy opening.

The lower loop with the Ochsner clamp still on it is placed in the lowest point of the median incision just above the pubes and in contact with it, and the wound is sutured in layers about it and throughout its full extent. The abdominal wound is sealed with a cocoon and if it is necessary the colostomy may be opened within a few days. The clamp usually cuts through the bowel of the lower segment within a week, at which time the median wound is healed so that it is no longer susceptible to infection.

As soon as the clamp is off the lower segment, irrigations are carried out two or three times daily with a rectal speculum in the anus, so that water passes freely from the suprapubic opening in the bowel, along the rectum, and out the anus, thus washing out all fecal material and irrigating over any ulcerated and infected area. By this time the colostomy is working well, and as much time as necessary can now be taken to get the patient into the best possible condition for the second stage removal, which can usually be undertaken within two weeks after this part of the operation.

If further delay is necessary, it can be unhesitatingly accepted, since the bowels move well enough through the colostomy and the lower segment of rectum remains alive and is nourished through the vascularization by the superior hemorrhoidal vessels and is being cleasned by its irrigations. A few days before the second stage is undertaken, the lower segment of rectum is irrigated several times with mercurochrome or S. T. 37 in an attempt, partly at least, to sterilize it.

At the second stage, the colostomy is sealed with a tight cocoon and the end of the lower segment of bowel which was implanted in the median wound is separated and sutured with silk or chromic catgut in a manner similar to that described for the suturing of the anus in the perineal removal of the rectum. The stump is painted with iodine. With a clean kit the abdomen is now reopened through the original median incision. An incision in the parietal peritoneum over the superior hemorrhoidal vessels at the level of the promontory of the sacrum is made and the vessels are tied. The peritoneum on either side of the rectum and in front of it is incised. The ureters are identified and dissected out. The rectum and its mesentery are freed from the hollow of the sacrum down beyond the tip of the coccyx, its lateral and anterior attachment also is freed, and the bowel is pushed down into the pelvis. The diaphragm of the pelvic peritoneum is restored above the rectum, and in the female, reinforced by the fundus of the uterus.

The patient is turned on her side. In Dr. Lahey's experience the lateral position for second stage removal of the rectum produces much less drop in blood pressure than does the position with the patient turned completely onto the abdomen.

The anus is sutured, the wound painted with iodine, a clean kit provided and the perineal removal is undertaken in the regular manner, the coccyx being detached or not as seems desirable in the case in hand. After the rectum has been removed, a rubber dam, a cigarette drain or a gauze pack may be inserted in the pelvic cavity as the case demands, depending upon how well oozing has been controlled.

Heretofore, the Miles' procedure has perhaps been the most generally accepted plan of combined abdominoperineal resection of the rectum. With this plan the colon is cut transversely and end colostomy is established either in the upper end of the median wound or in a lateral incision, it being necessary to establish the colostomy at the time that the pelvic dissection is made. Also in this procedure all of the blood supply of the lower rectum is ligated and therefore one has three undesirable features combined. 1. The production of an unopened colostomy obstruction. 2. A large pelvic dissection with a lareg area of raw tissue in the pelvis. 3. The placing of a dead segment of bowel filled with infected fecal material in this undrained pelvic pocket, which is covered above by the restored diaphragm of pelvic peritoneum. The most undesirable features of the Miles' operation are the production of an intestinal obstruction (obstructive colostomy) at the same time that a retroperitoneal infection is produced in a large, undrained, open pelvic cavity.

It is these undesirable features that have led those dealing with cancer of the rectum to incline toward a one stage combined abdominoperineal removal of the rectum when patients could possibly stand it. This one stage plan of procedure is often not practicable, however, because the shock it produces is great and because many of the patients are too debilitated to endure such an extensive operation.

That the Miles' plan is not entirely satisfactory is evidenced by the variety of modifications which have been devised and described from time to time. among these we may mention that of W. J. Mayo in 1912, Karl Dahlgren in 1913, D. F. Jones in 1915, Fred Rankin and R. B. Coffey.

Summary: Dr. Lahey at the time this article was written had employed the operative plan described upon seven patients with cancer of the rectum. His conclusion was that this method is itself not without undesirable features, but, as

a two-stage opertaion, appeared to offer a nearer approch to the ideal one-stage abdominosacral removal of cancer of the rectum than had other procedures. Among its desirable features are:

1. As much delay and preparation as desired are possible between the first and second stages of the operation.

2. The duration of the steps is better divided, the greater part being done in the second stage when the patient is in the best state of preparation.

3. The necessity of implanting dead bowel in the pelvis is overcome.

4. The second stage involves the removal of a clean empty rectum.

5. Good posterior drainage is established immediately after the extensive pelvic dissection.

Comment: Since we have become familiar with Dr. Lahey's technique we have employed it successfully in taree patients with cancer of the rectum. In our opinion the statements made by Dr. Lahey as to the advantages of this plan over any previous plan we had used are true in every respect. Since employing it we have approched these serious risk cases with considerably more confidence than previousiy. We feel that it is a decided improvement in the operation of combined abdomino-perineal removal of cancer of the rectum.

—LeRoy Downing Long.

Mortality Factors in Gynecology. Marshall K. Bartlett, M.D., and Fred A. Simmons, Jr., A.B., Brookline, Massachusetts. Surgery, Gynecology and Obstetrics, December, 1932, Page 777.

This is a statistical study of the deaths from 1902 to 1932, at the Free Hospital for Women in Brookline, Massachusetts. In those thirty years 17,695 patients were treated in the hospital. 262 deaths occurred of which 95 were cases of terminal malignancy, 19 were cases not operated upon and 148 were the result of operative complications.

Consideration of the operative mortality is the body of the article. In the period stated 16,829 operations were performed, which with the operative mortality of 148 cases gives a gross per centage mortality of 0.96%. Comparative statistics are quoted from other reputable clinics, with the mortality rates from 0.57% to 2.9%.

For purposes of tabulation the gross operative mortality was divided into:

1. Plastic operations with a mortality of 0.22% in a series of 5,526 cases.

2. Laparotomy operations with 1.2% in a series of 3,357 cases.

3. Double operation (i.e., plastic and laparotomy combined) 0.93% in a series of 7,001 cases.

4. Breast operations, examination under anesthesia and miscellaneous cases are also given, but in smaller groups than is necessary for really valuable statistical evidence.

The various divisions stated above are analyzed very completely in both the text and a number of tables.

The next phase of the article deals with the causes of death which are tabulated in the following table:

	Deaths	Per cent	Age (yrs.)
Peritonitis	34	22.9	37.5
Shock	22	14.9	49.0
Pulmonary embolus	21	14.2	52.4
Under ether	18	12.3	41.1
Pneumonia	16	10.8	44.3
Myocardial failure	11	7.4	55.0
Renal complications	8	5.4	43.3
Miscellaneous	8	5.4	55.5
Acute myocarditis and coronary embolus	4	2.7	46.5
Intestinal obstruction	3	2.0	48 0
Cerebral accident	3	2.0	55.3

Following this there is an association between the cause of death following various operations for specific pathological conditions and the outstanding causes have been discussed. Special attention is given to patients dying under ether during operation.

Comment: Numerous statistical reports such as this have appeared in the literature, and there are some who are inclined to look upon them as a moderately useless bit of clerical work. It is my own opinion that they have two very distinct beneficial effects. Firstly, one should be cognizant of the operative mortality in a particular patient's situation, both generally and in one's own experience, before he is justified in subjecting that patient to operation. Especially is this true, as in the case of gynecology, when the operation is an elective procedure. Secondly, such reports as this stimulate surgeons to compare their own experience with those of others and if their mortality statistics are not so good it should influence them to look more carefully into their own work and thereby make improvement.

—Wendell Long.

BOOK REVIEWS

Children's Tonsils In or Out. A Clinical Study of the End Results of Tonsillectomy. By Albert D. Kaiser, M.D., Associate Professor or Pediatrics, University of Rochester Medical School; Chief Pediatrician, Rochester General Hospital; Pediatrician, Rochester Dental Dispensary. Illustrated. J. B Lippincott Company, Philadelphia, London, Montreal.

This volume is the result of ten years of study of the procedures of end results connected with the removal of diseased tonsils and adenoids. No one longer questions the danger of diseases of these organs, their far reaching effects often end in early fatalities. It is well to note symptoms of some of the findings; for instance mouth breathing due to nasal obstruction certainly paves the way to early tonsillar infection. Other significant features are that in Rochester 40 per cent of 4400 children surveyed, between the ages of 6 and 14 years, had recurrent attacks of tonsillitis. While in a group of rheumatic children, Ingraham and Wilson found that 77 per cent had been subject to recurrent attacks of tonsillitis. It is also remarkably shown that after removal of diseased tonsils and adenoids the incidence of common colds fell from 36 per cent to 3 per cent.

This volume is a strong argument for prompt removal of diseased tonsils and adenoids.

Synopsis of Gynecology. Based on the Textbook, Diseases of Women. By Harry Sturgeon Crossen, M.D., F.A.C.S., Professor of Clinical Gynecology, Washington University Medical School, and Gynecologist in Chief to the Barnes Hospital and the Washington University Dispensary; Gynecologist to St. Louis Maternity Hospital, St. Luke's Hospital, and the De Paul Hospital; Fellow of the American Gynecological Society and by Robert James Crossen, M.D., Instructor in Clinical Gynecology and Obstetrics, Washington University School of Medicine; Assistant Gynecologist and Obstetrician to the Barnes Hospital and the St. Louis Maternity Hospital; Gynecologist to St. Luke's Hospital and De Paul Hospital. 110 illustrations. Cloth. Price $2.75. The C. V. Mosby Company, St. Louis, 1932.

This volume has been prepared principally for the use of medical students, however, it will be found very useful to many medical men.

Clinical Gynecology. By C. Jeff Miller, M.D., Professor of Gynecology, Tulane University School of Medicine; Chief of the Department of Gynecology of Touro Infirmary; Senior Visiting Surgeon, Charity Hospital, New Orleans. Illustrated. The C. V. Mosby Company, St. Louis, 1932. Price $10.00.

Dr. Miller is one of our best known authorities on gynecology and has been a progressive leader in that line of work for many years. He states in his preface that this work was prepared to follow a former volume "An Introduction to Gynecology." He stresses the fact that it is intended solely for the student, who, because he is just beginning his study of gynecologic therapy, lacks the ability to use the larger and more comprehensive texts selectively. He also omits hyperplasia of the endometrium from the category of inflammatory diseases because he considers them under the head of functional bleeding; likewise diseases of the urinary system and of the lower intestinal tract are omitted, not that the gynecologist does not see them as frequently as the urologist or general surgeon, but because those aspects are more or less devoted to special subjects.

The portion of this work devoted to operative procedures is beautiful as well as practicable. The stages of each operation being set out in detail in order that the student or physician undertaking this work may have a step by step clear cut picture in his mind before undertaking such an operation.

Infants and Children. Their Feeding and Growth. By Frederick H. Bartlett, M.D., Director of the Department of Pediatrics, Fifth Avenue Hospital, New York. Paper. 409 pages. Farrar and Rinehart, New York, 1932.

This little volume contains 19 subdivisions, concisely written, about every subject to which infants and children are affected.

Final Report of the Commission on Medical Education. Cloth, 560 pages. Issued by the Office of the director of Study, 630 West 168th Street, New York.

This is a statistical work covering every phase of medical education in the United States as well as that offered in foreign countries. It has been in preparation since 1925 and naturally the accumulation of data has required many years.

Radiologic Maxims. By Harold Swanberg, B. Sc., M.D., F.A.C.P., Editor of The Radiological Review, Quincy, Illinois. With a foreword by Henry Schmitz, A.M., M.D., L.L.D., F.A.C.S., Professor of Gynecology and Head of the Department, Loyola University School of Medicine. Cloth. Price $1.50, 126 pages. Quincy, Illinois: Radiological Review Publishing Company, 1932.

INCIDENCE OF CARCINOMA IN CERTAIN CHRONIC ULCERATING LESIONS OF THE STOMACH

From a study of the literature and of their own cases, George W. Holmes and Aubrey O. Hampton, Boston (Journal A. M. A., Sept. 10, 1932), believe that it is fair to state that any chronic, indurated, ulcerating lesion occurring in the pyloric antrum within 1 inch of the pylorus, but without involving the pylorus, should be considered malignant until proved to be otherwise, and that proof of the absence of malignancy in such lesions is obtained only by serial section and careful microscopic examination. It is not safe to interpret such lesions as benign from roentgen examination alone or from observation on the operating table. Given a case presenting such a lesion in the prepyloric area, it is probably safer and wiser to treat the lesion by wide surgical removal than by medical or palliative treatment. The same is true of all chronic, indurated, ulcerated, ulcerating lesions occurring on the greater curvature and probably with most lesions occurring in the cardiac end of the stomach. The benign, chronic, indurated, peptic ulcer occurs on the lesser curvature above the antrum or in the region of the plyoric valve. Accurate localization of these lesions is of the greatest importance, but is sometimes difficult; foreshortening of the shadow of the stomach on the X-ray film may make the niche of the ulcer appear closer to the pyloric opening than it actually is. Careful fluoroscopic observation or films taken at various angles should obviate this error. Large ulcers occurring low on the lesser curvature may extend into the region of the antrum; similar ulcers arising in the region of the pyloric valve may extend into the stomach. They should not be classified as prepyloric ulcers. In their presentation the authors purposely avoided a discussion of the various roentgen studies which help to differentiate benign from malignant ulcerations, other than position. They are all important, and all facts, including those obtained from the history and physical examination, should be considered in the final diagnosis.

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NOTE—Corrections and additions to the above list will be cheerfully accepted.